

# MAN IN INDIA

Vol. XXXII( )

July—September, 1952

{ No. 3

## CURRENT RESEARCH PROJECTS IN INDIAN ANTHROPOLOGY

By Nirmal Kumar Bose

### Introduction

ON and about the 15th of September, 1951, a letter was circulated to the Heads of the Departments of Anthropology in the Universities of Calcutta, Lucknow, Delhi, Madras, Gauhati, and of Sociology at Osmania (Hyderabad).\* A slightly modified letter was also addressed to the Director, Department of Anthropology, Ministry of Education, Government of India at the Indian Museum, Calcutta. Answers were duly received ; and it is the purpose of the present paper to give a general account of the *actual problems* in which investigation is being carried on at the present moment in different institutions, along with such details regarding finance or personnel as may serve to give a clearer picture of the nature and importance of these undertakings. It should be recalled in this connection that work is also being carried on in anthropology by distinguished individuals, as it has been for many years in the past ; and such contributions have often been of great value in advancing the cause of our science. But the present report is confined only to organized institutions connected with anthropology ; and that too, with regard to their activities in the present or the recent past.

### Circular Letter

Dear .....,

I am preparing an article on the present state of anthropological research in India, and it will be very helpful if you find it possible to send the following particulars regarding your Department.

1. The total expenses in the Department during the last financial year, giving the proportion spent on (a) salaries, (b) travelling, (c) field research, (c) laboratory and (e) library, if that is included in the departmental budget.

\* Anthropology is taught in the Department of Sociology.

2. The number of members of the staff, stating their status (e. g., Professor, Reader, Lecturer, etc.).
3. The period for which they have been connected with the Department; the *actual problems* on which they have been working; the period during which they have been engaged on each problem; the results, if any. The last, of course, refers to published works alone.
4. The number of students in each class during the last academic year.
5. The direction in which you are trying to develop the Department, along with a statement of the difficulties which are coming up in the way.

I do hope you will find it possible to co-operate in the preparation of this report.

Yours sincerely,  
N. K. B.

#### Gauhati University

The reply is dated 1st October, 1951. The staff in Gauhati consists of one Lecturer in Social Anthropology, one Lecturer in Physical Anthropology and one Demonstrator. Out of a total expense of Rs. 22,880/-, Laboratory equipment and specimens cost Rs. 8,165/- (35.7%) and Rs. 643/- (2.8%) were spent in excursions.

Mr. Madhab Chandra Goswami also writes : "The activities of the Department are confined, at present, to teaching work in the Under-Graduate classes (both Pass and Honours). Emphasis is being laid on teaching work and the building up of an up-to-date ethnological museum. The Department has to be expanded in order to make provisions for Post-Graduate studies in Anthropology — both social and physical. The University authorities are keenly interested in its expansion.

"The difficulty is to get employment for the students. If the State government fails to utilise the services of the trained graduates in Anthropology, few students will, in future, feel encouragement to take up the subject".

#### Madras University

The reply from Dr. U. R. Ehrenfels is dated 30th November, 1951. The staff consists of a lecturer in anthropology and one Research Student. Out of a total expense of Rs. 11,058/-, Rs. 720/- (6.5%) is paid to the Research Student, research expenses and travelling cover Rs. 298/-

(2·7%) and books and equipments cost Rs. 570/- (5·2%). The number of students is as follows : Diploma Course, 5 in 1949-50, 2 in 1950-51; Certificate Course, 4 in 1949-50, 5 in 1950-51.

Dr. U. R. Ehrenfels carried out Some research among the Khasis of Assam and the Malayalar of North Malabar. This work was partly financed by the Viking Fund, Inc.— now Wenner Gren-Foundation for Anthropological Research, Inc., New York. The subject of Dr. Ehrenfels's research has been 'Comparative studies of Matrilineal Societies in India'.

With regard to the line of development of his Department, Dr. Ehrenfels writes : "The Board of Studies in Anthropology, Madras, has recommended, and the Academic Council of Madras has decided, within the 1950-51 period to make Anthropology a main subject for B. Sc. and B.A. Courses, but the syllabus, recommended for this by the Board of Studies in July, 1951, could not yet be placed before the Academic Council nor the Board's recommendations for research students to be enabled to qualify for Ph. D. in Anthropology. I hope to get Anthropology recognised as a subject for "Honours" only after which lively interest on the part of colleges and students can be expected.

"Apart from these plans for wider teaching-facilities, I am planning to make this Department of Anthropology in Madras a centre for systematic field researches in problems peculiar to South India, though connected with other areas (Assam, the Arabian Sea Islands, Ceylon, Sumatra, East Africa, Oceania), but find it difficult to get the necessary finance and staff under the present place allotted to Anthropology in this University.....

"Another serious difficulty which I am experiencing is the necessity of my presence at holding certificate and diploma classes and examinations, so that insufficient time is available to carry out field research,

"The relevant areas (mainly S. W. India, Islands and Assam) happen to lie in the monsoon belt and the University vacations (May-June) coincide with the rainy season, when field work there is impossible. My request for absence on duty to carry out field researches in March-April has not been granted and it was suggested that I may take "earned leave", in which case, I will not be able to continue field work before the lapse of some years, during which new "earned leave" would accumulate."

### Calcutta University

The reply from Prof. K. P. Chattopadhyaya is dated 4th October, 1951. The staff at Calcutta consists of one Professor and six Lecturers. Out of a total of Rs. 49,558/- the Research grant for the Professor is Rs. 500/- and for the Lecturers is Rs. 750/- (2·5%), Models, Goods and Lump Grant with an allowance for Under-graduate teaching account for Rs. 2,750/-. The number of students is as follows : Third Year 9, Fourth Year 14, Fifth Year 11, Sixth Year 13.

Prof. K. P. Chattopadhyaya has been studying the Santals intensively since 1938 and is now nearing the completion of his work. A report on their economic condition and the problems of their administration was published in 1947. He also carried out a survey of the condition of jute workers in the industrial belt as well as of labourers in Calcutta, and published his report under the title, "A Plan for Rehabilitation of Bengal". Another pamphlet entitled "A Socio-economic Survey of Jute Labour" is in the press. A report on "Municipal Labour in Calcutta" was published in collaboration with Mr. G. S. Ray. A study of Juvenile Delinquency was taken up early this session with the help of one Research Assistant. Prof. Chattopadhyaya moreover writes : "The genealogies of the large number (eighteen thousand for the whole of Bengal) of families studied during the survey of 1944-45 (to help rehabilitation after the famine of 1943) have been tabulated on the basis of different social and economic strata for West Bengal to ascertain the pattern of the family prevalent in that period. Owing to lack of funds this tabulation could be taken up only in 1949 for a short period, was dropped after three months owing to financial stringency, and again taken up early this year and nearly completed for West Bengal with the funds available. It will be completed next year."

"A comparative study of the physique of boys of lower middle class and upper middle class folk, at School and College, based on the measurements of Dr. A. N. Chatterji (about ten thousand boys are being studied) is being carried out by refined statistical technique in collaboration with Dr. Ramkrishna Mukerji. The work was started in November 1951.

Mr. T. C. Das published his report on "The Bengal Famine". A monograph on the Purums has already been published, while another on the Chirus is in course of preparation. Under his supervision, one Research Student carried out an intensive survey of a Bhumij village in Manbhumi.

Mr. T. C. Roychoudhury delivered his Presidential address at the Indian Science Congress (Section of Archaeology and Anthropology) in Calcutta in January, 1952 on "The Racial Problem in Bengal".

Dr. M. N. Basu has been working recently on the Refugee Problem in Bengal. He has also been continuing his work on the cleaning and preservation of museum specimens by means of indigenous products.

Messrs. D. Sen and G. S. Ray have been working on a palaeolithic site in Mayurbhanj; their special problem being a reconstruction of the climatic background, tool sequence and correlation of that area with other parts of the world. Quite recently Mr. Sen visited Madras for this purpose. Fresh palaeolithic and neolithic sites have recently been discovered in Manbhum, Dhalbhum in Singhbhum, Mayurbhanj and Midnapore, and these are also under examination by the Department.

Mr. N. K. Bose has been working off and on for the last 28 years on the evolution of North-Indian temples. His principal object is to test the reliability of diffusion and differentiation as measures of age. He has been trying to map out the different elements which make up the North-Indian temple, and prepare a scale of relative chronologies based upon the extent of distribution and the amount of differentiation of such elements. Many temples in India, again, are dated accurately with the help of inscriptions. An independent scale of evolution is being built up with the help of such temples. By comparing the results arrived at by means of the first method with that of the second, it would be possible to determine the reliability, or limitations, of the first method as applied in cultural archaeological reconstruction.

#### Lucknow University

The reply from Prof. D. N. Majumdar is dated 12th January, 1952. The staff here consists of one Professor, three Lecturers, one Research Assistant. A Senior teaching post for Specialisation in Prehistory is vacant. Out of a total of Rs. 49,320/-, Laboratory and Library grants amounts to Rs. 9,500/- (19.3%), Travelling expenses amount to Rs. 500/- (1.0%), Field Research Rs. 4,600/- (9.3%) and Rs. 10,000/- has been earmarked for the Social Survey of Lucknow City (20.3%). The number of students in 1950 was as follows: M. A. Final, Cultural Anthropology 7, Physical Anthropology 6, M. A. Previous 18, B. A. Final 40, B. A.

Previous 70. The number of students has gone up since then and 100 Students have been admitted to B. A. Class this session. There are 12 Ph. D Students, and two have been admitted to the Ph. D. degree this year.

Prof. D. N. Majumdar, who has been connected with the Department for 24 years, writes in his reply that "it is not possible" to furnish a reply to the third item in the circular letter. \*He does not mention any specific problem on which he has been specially working, but the trend of his investigation and thoughts can be gathered from the titles of the books which he has so far published. They are 'A Tribe in Transition', 'Fortunes of Primitive Tribes', 'Races and Cultures of India', 'Matrix of Indian Culture', 'Affairs of a Tribe', 'Race Realities in Cultural Gujarat' 'Race Problems in Asia' (co-authorship with Dr. I. Karve).

Shri K. S. Mathur has been working since July, 1951 on "Tribal Religion and its role in the integration of Nature and Society".

#### Osmania University

Dr. S. C. Dube of the Anthropological Museum, Osmania University replied on the 3rd of March 1952. He states : "At present we have two departmental research projects, and four research scholars who are working for their Ph.D. on subjects carefully chosen by the department. As Dr. Haimendorf has described three of the Hyderabad tribes at great length—and with great scientific accuracy—I decided to study mixed groups. For this purpose we selected two villages. The first village, Dewara, is in tribal Adilabad District. It has a mixed population of aboriginal tribes—Raj Gond, Kolam and Pardhan, Hindu castes—both Maratha and Telugu speaking and a few Muslims. With the help of my research assistants and some post graduate students I am studying the interaction of cultures in this village intensively.

"The second community study project—also being conducted by me with the help of an inter-faculty team—is intended to study life and structure of a village called Shamirpet, some twenty miles from Hyderabad. As the Director of the University Social Service Extension Project, I have ample funds for this work. We have organized a

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\* Later on also the reply could not be had as Prof. Majumdar left for participating in the Wenner-Gren Foundation Symposium on World Status of Anthropology, in New York, early in the year,

community centre at this village. In the village we have two camps annually—a summer camp of two months and a winter camp of two weeks. Every week two members of the unit spend at least two days in the village. The composition of the team is as follows :—

| Name of the Faculty | No. of members    | No. of students   |
|---------------------|-------------------|-------------------|
| Arts                | 2 Research Assts. | 2                 |
| Medicine            | 1 Lecturer        | 3                 |
|                     |                   | (1 woman student) |
| Agriculture         | 1 Lecturer        | 3                 |
| Veterinary Science  | 1 Lecturer        | 2                 |
| Education           | ...               | 2                 |
| Engineering         | 1 Lecturer        | 2                 |

"Besides the usual anthropological investigation, we have done a careful nutritional survey, an exhaustive medical examination of the whole village and agriculture, animal husbandry, building technique etc. have all been studied carefully. This summer we hope to complete the study.

"The Dewara project is financed by an annual 'Educational Tours Grant' of Rs. 800/- and another grant of Rs. 1,500 (annual) towards the expense of research. The second is financed by budget provisions for the Extension Project. Last year we had Rs. 8,000/- for a research-cum-social welfare scheme; and this year we have Rs. 20,000/-; but this includes money for the construction of a building for the community centre.

"Three research students are working under my supervision for their Ph.D. with a fellowship of Rs. 150/- per month. In addition to it, it is proposed to give them their journey expenses and a small daily allowance when they are in the field. The fourth student is a Lecturer in the Department.

#### Delhi University

The reply from Dr. P. C. Biswas is dated the 29th of April, 1952. The staff consists of one Reader, three Lecturers and one part-time Lecturer. Out of a total of Rs. 23,780/-, Recurring grant, including expense of field work, cover Rs. 3,000/- (12·6%) and Library expenses cover Rs. 500/- (2·1%).

Dr. Biswas writes: "We are at present working among the tribal people of the cis-Himalayan region. For the last 3 years we are

working among the Tehri Garhwalis of Tehri State, the hill tribes of Jaunsar Bawar near Dehra Dun within Chakrā and also among the Kanaits of Simla Hills. One of my research students is working among the Rajis of Askote, District Almora, a very primitive people living near the Nepal border. He has also collected some data on the Bhotias of this region and has already published one article on the Rajis and has prepared another on the blood group of the Bhotias.

"Our study of the hill tribes comprise all aspects of Anthropology i. e. both Physical and Social. I have done some somatometric work on the Sikhs of Punjab including blood groups and finger prints and the paper I have already sent for publication in the "Journal of the Indian Anthropological Institute". Another Ph. D. student is doing work on the Bhangis (socio-ethnic studies of the sweepers) of Delhi Province and his thesis is nearly ready for submission. Mr. B. B. Verma a Ph. D. student of our University is working on the effect of culture contact on the Uraons of Ranchi District for one year and is now writing his thesis.

#### **Department of Anthropology, Government of India**

Dr. B. S. Guha, Director of the Department, sent in his report in October, 1951. He wrote : "There are three major divisions under the Department, namely, (i) Physical Anthropology including Applied Biology dealing with problems of human heredity, (ii) Cultural Anthropology including languages of primitive tribes and (iii) Social Psychology comprising sociometry and the study of Personality Structure of the individuals within the communities. In addition, arrangements were made for giving advanced training including participation in field work for approved students holding a Master's degree, who received stipends from the Government.....Eight trainees have so far received training and 8 more are now going through the courses. Requests from the late Thakkar Bapa, the great humanitarian and social worker for the cause of the depressed and downtrodden classes of this country, and the Government of Assam were also received to arrange for special courses of training to their officers who are employed in tribal areas and who work for social uplifting, in the cultural and psychological patterns of the Indian primitive tribes and their mentality.....

"Within the short period of its existence The Department of Anthropology was created into an independent Department un-

der the Ministry of Education in 1946, after its separation from the Zoological Survey of India (Dr. B. S. Guha was appointed as Anthropologist in the Zoological Survey of India in 1927.), the Department made several important surveys namely, (1) the lower portion of Jaunsar-Bawar area (2) the Orissa hill tribes, particularly among the Laiyha Saoras and Bondos under Dr. Verrier Elwin (3) Little Andaman Island (4) the hill tribes of Travancore (5) the Angami Naga tract around Kohima and the Abor Hills for two successive years. A survey of the distribution of the major groups of the Abor tribe was made. A detailed wire record of Abor music, phonetics, were taken on our wire recorder and cinema films both coloured and in black and white were taken of their religious rites, dances etc. For the first time a first-hand study of their dietetics was made which is certain to throw a great deal of light on the excellence of health and physique of these primitive folk. The researches on the Roentgenometric study of the human hand and skeleton and of metacarpal bones with the help of over 200 skiagrams are of special importance for India where studies of such precision have not been made before.

"The most outstanding scientific investigation, however, was the survey of community life in two centres of Southern Bengal, namely, the rural area of Sarisa Union and the industrial area of Birlapur (Budge Budge) in connection with the Unesco Project of Pilot Studies of Community Life in India, Australia, France and Sweden...For this purpose a detailed Bio-Socio-Economic survey of the people was undertaken by a team of competent researchers.

"In addition, for the first time in India, latest Projective Tests like Rorschach, T. A. T. and Horn-Hellsberg were applied on a large sample of the people to determine the Personality Structure of the individuals forming the community. Other sociometric methods, such as the Social Distance and Attitude Scales etc. were also applied. The field survey of the project was completed in February, 1951 and the major portion of the materials collected have been scrutinised and statistically reduced. The final report, which is now under preparation, when published, will easily be the most complete scientific study of the community life in this country.

"The study of the tension prevailing among the Refugees from Eastern Pakistan now settled in West Bengal, was also undertaken by the Department as part of the Tensions Study of Prof. Gardner Murphy, who recently visited India on behalf of the UNESCO. The field

Investigations of this project at the Government camp at Jirat (Hooghly District) and the Refugee colony at Azgarh (Jadavpur) are also complete and the report based upon sociometric and psychometric data collected are being analysed and integrated. This study is expected to throw a great deal of light on many aspects of the refugee problem.

"Finally, there is a scheme, which has been sanctioned by the Government, for starting a Sub-station of this Department in the Andaman Islands. During the 150 years of British connection the hostile Jarawas and other aboriginal inhabitants of the Andaman Islands have not been subdued, although the more friendly of the tribe living near Port Blair have been virtually wiped off. It has not been possible to administer these tribes with the help of bush police. At the suggestion of the Andaman administration it has now been decided by the Government of India to start a small station of the Anthropology Department to pursue systematic studies of these people and on the materials collected thereby, it is hoped that a more peaceful contact with the hostile aboriginal tribes will be possible.

"The Department has already published in the main Indian languages pamphlets giving an up-to-date scientific account of the distribution and affinities of the Indian racial types.\* The first issue of its Bulletin containing accounts of the researches undertaken in different branches is in the press and is expected to be out shortly."

Besides those who have been connected specifically with the projects described above by the Director, the following officers have been pursuing, more or less, independent lines of investigation. Mrs. U. Guha applied mental tests to Bhil women and studied the blood group distribution among the Bhil tribe. Dr. E. C. Buchi did some restoration work on skulls and worked upon the following problems: (1) The physical appearance of the Tibetans and their racial affinity with neighbouring peoples; (2) The Simian crease and its distribution in different populations. Dr. S. S. Sarkar determined the blood groups of the Onge of Little Andaman, while, in continuation of his previous work, he carried on investigation "to find out the hierarchy of the various castes through blood groups". Some data was also collected by him about plural births from the records of two Calcutta hospitals.

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\* The pamphlet giving an account of Indian racial types is actually based upon Dr. B. S. Guha's anthropometric survey in connection with the Census of India, 1931. Altogether 2,511 individuals were measured out of India's population of nearly 400 millions (See review by Arthur Keith in *Man*, February 1936) *Editor.*

Dr. B. K. Chatterji made diaptographic tracings and osteometric analysis of bones excavated in Mohenjodaro, Harappa, Taxilla, Ujjain, and collected somatometric data from tribes like the Kanikkar, Malapantaran, Kuravan, Urali, Muthuvan and Patiyan. Mr. R. C. Nigam collected some material on Saora phonology and folktales and the Abor language. Mr. H. K. Bose conducted excavation of megalithic tombs in South India and studied the associated racial elements. Dr. A. K. Mitra found out a new method of measuring the torsion angle of the human femur and made anthropometric studies among various castes in Bihar and West Bengal. Mr. Bhabananda Mukherji studied the social organization and marriage rules among the Kanikkars and the Uralis.

### Summary

When we try to classify the different research projects in the various institutions of India, we obtain the following general picture.

*Physical Anthropology*.—Comparative study of School and College students belonging to the lower middle and upper classes (Calcutta); Somatometric studies of the Sikhs, Blood group and Finger print studies of Himalayan tribes (Delhi); Roentgenometric studies of the human hand and skeleton, Racial affinity of the Tibetans, Distribution of the Simian crease, Blood groups of the Onges, Blood groups of various Hindu castes, Plural births, Osteometric analysis of excavated human remains, Racial studies of the megalith builders (Anth. Dept.), Growth Studies and Serology (Lucknow).

*Ethnography*.—Khasi and Malayalar (Madras); Santal, Purum, Chiru, Bhumij (Calcutta); Mixed groups, Raj Gond, Madiga, Lambada (Osmania); Garhwalis, Kanaits and other cis-Himalayan tribes, Bhangis (Delhi); Saora, Bondo, Abor, Kanikkar, Urali (Anth. Dept.), Revision of the ethnographic literature on U. P. (Lucknow).

*Sociology and Social Psychology*.—Matriarchy (Madras); Changing Family structure, Municipal labour, Juvenile delinquency, Refugee problem (Calcutta); Community life in rural and urban areas and associated Personality types, Refugee problem and Tension studies (Anth. Dept.).

*Culture Processes and Functions*.—(a) Change: Oraon (Delhi); (b) Cultural Dynamics, Functional Studies and Tribal Religion (Lucknow); Diffusion and Evolution (Calcutta); Inter-relations (Osmania).

*Prehistoric Archaeology*.—Orissa and West Bengal (Calcutta); Megaliths of South India (Anth. Dept.).

### Observations

If these are plotted on the map of India, it would appear that altogether the area covered by the various institutions is microscopic in comparison with the total area of the population of India. What is more striking is that tribes have been chosen for description with no concerted end in view. A large part of the work of the Universities is taken up by teaching ; and the little time or money which is assigned to the furtherance of research has consequently to be devoted to easily accessible tribes, even when there is no special, scientific reason for choosing them. Research problems, as such, are singularly infrequent. There are short term projects, but planning on an all-India or long-term basis is not very much apparent. Each institution seems to work on its own, without any obvious contact or co-operation with sister institutions.

On the 30th of October 1951, the writer had an interview with Dr. B. S. Guha, Director of the Department of Anthropology, when the reason was asked as to why Abors or Kadars, for instance, had been picked up for ethnographic description ; how again personality studies undertaken in rural and urban areas near Calcutta were going to be of help in regard to India's outstanding anthropological problems. He was told by the Director that although no particular problem was immediately in sight, yet, if the Department continued its work of survey and accurate description of different portions of India, then, in course of time, a full picture of the racial, sociological and cultural elements and their interactions in India would gradually emerge, and problems also define themselves, as the Department reached nearer and nearer the completion of its work.

Today in India, we do not even know accurately the geographical distribution of tribes. Each tribe or linguistic group in our country shades slowly into another ; and the junctions of cultures or of physical types are very imperfectly, or perhaps not known at all. The distribution of such elements as pottery types and techniques, processes of metal working, techniques of oil extraction or the ceremonial uses of oil may be subjected to similar geographical treatment. It is well-known that these are ancient arts and crafts, and have persisted in different localities or among certain specific sections of the population as they have not done anywhere else in the world. Their analysis is likely to reveal unsuspected trends in migration and cultural interaction. Maps or studies of this kind, and which easily lie within the means and the time available in the intervals of teaching work at the Universities, are likely to

be of great help to those who are planning to do more intensive work in one part of India or another.

India has often been described as a paradise for anthropologists. Many of the tribes are changing fast, and a large amount of ethnographic material of inestimable value is in danger of being irretrievably lost. Under these circumstances, it appears better that we should conserve our energy and not become lost in undertakings which might more justifiably be taken up by Departments of Sociology or Psychology, of which there is no dearth in the Universities of India. Anthropology is also sociology in some of its aspects ; but its special method is the method of comparison. It has moreover some problems of its own connected with the structure and history, as well as the function of culture in relation to the life of the social organism known as man. It has moreover to classify and find out the causes of racial differentiation, and finally to correlate physical and cultural evolution, in so far as that is possible.

These are aspects of anthropological science which are, on the whole, poorly represented in the projects described in connection with the various institutions of India. There does not seem to be any problem which Indian anthropologists have made peculiarly their own. Anthropologists in our country have, on the whole, followed the tracks beaten by anthropologists in the more powerful countries of the West. What they do, we generally try to repeat on the Indian soil. There are, of course, exceptions ; but they seem to be few and far between. If, instead of following such beaten tracks, we set our mind on the anthropological scene in India and let our problems grow out of the life of our own people, and if we fashion our intellectual tools accordingly, there is no reason why India, with such an abundance of raw material, should fail to add her own share to the progress of this fundamental social science.

## DERMATOGLYPHIC STUDY OF FINGERS AMONG URAONS OF CHOTA NAGPUR

By Brind Bihari Verma

I took finger and palmar prints of the Uraons from the district of Palamau in Bihar during the winter of 1950-51. Palamau is second to the district of Ranchi in the density of its Uraon population. One finds a little difference between the Uraons of Ranchi and Palamau districts of Chota Nagpur. The Uraons of the latter district have changed a little through acculturation.

The material for this investigation consists of 1,770 finger prints of 177 individuals (both male and female). I have shown the sex-difference in the occurrence of patterns in the finger-prints.

In the table given below, the three finger pattern types, whorl, loop (both open to the radial and ulnar sides) and arch are shown in absolute numbers and percentages, among 1,770 fingers.

TABLE I

| Types of pattern.             | Absolute No. | %    |
|-------------------------------|--------------|------|
| Whorl (W)                     | 647          | 36.6 |
| Radial loop (L <sup>r</sup> ) | 90           | 5.1  |
| Ulnar loop (L <sup>u</sup> )  | 924          | 52.2 |
| Arch (A)                      | 109          | 6.1  |
|                               | 1,014 Total  | 57.3 |
|                               | Loop         |      |

The pattern loop appears in largest percentage, out of which loop opening towards the ulnar side occurs in greater percentage than the loop opening towards the radial side. The pattern arch occurs in the least out of the three patterns.

The next table shows the occurrence of whorl, loop and arch in different proportions digitwise separately in both of the hands.

TABLE II

| Fingers. | Whorls |     |       | Loop   |     |       |       |     |       | Arch |     |       |
|----------|--------|-----|-------|--------|-----|-------|-------|-----|-------|------|-----|-------|
|          |        |     |       | Radial |     |       | Ulnar |     |       |      |     |       |
|          | Rt.    | Lt. | Total | Rt.    | Lt. | Total | Rt.   | Lt. | Total | Rt.  | Lt. | Total |

|     |    |    |     |    |    |    |     |     |     |    |    |    |
|-----|----|----|-----|----|----|----|-----|-----|-----|----|----|----|
| I   | 82 | 68 | 150 | 13 | 14 | 27 | 77  | 88  | 165 | 5  | 7  | 12 |
| II  | 59 | 68 | 127 | 21 | 21 | 42 | 74  | 66  | 140 | 23 | 23 | 46 |
| III | 45 | 51 | 96  | 3  | 6  | 9  | 115 | 106 | 221 | 13 | 14 | 27 |
| IV  | 94 | 92 | 186 | 1  | 2  | 3  | 78  | 73  | 151 | 4  | 10 | 14 |
| V   | 50 | 38 | 88  | 3  | 6  | 9  | 121 | 126 | 247 | 3  | 7  | 10 |

In the above table, whorl type is present in greater number in fingers I and IV. Marked difference is also seen in the presence of "W" type between the right and left I digits, but this difference becomes less in the case of digit IV. This difference is also evident in the case of digit V. The occurrence of the type ulnar loop is larger in III and V digits. Radial loop is found in larger number only in digits I and II of both the hands, but in the case of arch a higher trend is noticeable in digits II and III. But there is no difference with regard to the radial loop and arch between the right and left hands.

The frequencies of the three pattern types in percentages separately in both the hands are shown in the table below.

TABLE III

Total pattern types in percentage in I—V fingers of both the hands of the Uraons (1770).

| Finger | Hand  | Whorl | Radial | Loop  | Total | Arch. |
|--------|-------|-------|--------|-------|-------|-------|
| I      | Both  | 42.37 | 7.62   | 46.61 | 54.23 | 3.39  |
|        | Right | 46.32 | 7.34   | 43.50 | 50.84 | 2.82  |
|        | Left  | 38.41 | 7.90   | 49.71 | 57.61 | 3.95  |
| II     | Both  | 35.87 | 11.86  | 39.54 | 51.40 | 12.98 |
|        | Right | 33.33 | 11.86  | 41.80 | 53.66 | 12.98 |
|        | Left  | 38.41 | 11.86  | 37.28 | 49.14 | 12.98 |
| III    | Both  | 27.12 | 2.54   | 62.43 | 64.97 | 7.62  |
|        | Right | 25.42 | 1.69   | 64.97 | 66.66 | 7.34  |
|        | Left  | 28.81 | 3.39   | 59.89 | 63.28 | 7.90  |
| IV     | Both  | 2.54  | 0.84   | 42.65 | 43.49 | 3.95  |
|        | Right | 53.10 | 0.56   | 44.06 | 44.62 | 2.25  |
|        | Left  | 51.98 | 1.12   | 41.24 | 42.36 | 5.65  |
| V      | Both  | 24.86 | 2.54   | 69.78 | 72.32 | 2.82  |
|        | Right | 28.25 | 1.69   | 68.36 | 70.05 | 1.69  |
|        | Left  | 21.47 | 3.39   | 71.20 | 74.59 | 3.95  |

The above table gives the total percentages of the pattern-types in I-V fingers of the right and left hands of the Uraons. Difference exists between the digits of the right and left hands with regard to the frequency percentages of the three pattern-types.

### SEXUAL VARIATION.

TABLE IV.

Pattern-Type Frequencies compared in the sexes of different races.

| PEOPLE.              | M    | A   | L    | E    | S    | F    | E   | M    | A    | L    | E         | S |        |
|----------------------|------|-----|------|------|------|------|-----|------|------|------|-----------|---|--------|
|                      | A%   | L%  | Lu%  | T.   | W%   | A%   | Lr% | Lu%  | T.   | W%   |           |   | Author |
| Tobabat-<br>aks.     | 1.6  | 3.1 | 52.2 | 55.3 | 43.0 | 1.9  | 2.7 | 55.8 | 58.5 | 59.6 | Massland. |   |        |
| Koreans.             | 2.3  | 3.7 | 52.5 | 56.2 | 44.7 | 2.8  | 2.6 | 51.2 | 53.8 | 45.7 | Kubo.     |   |        |
| Portugu-<br>ese.     | 2.4  |     |      | 65.1 | 32.4 | 2.8  |     |      | 68.1 | 29.0 | Valadare- |   |        |
| Javanese.            | 2.7  | 2.8 | 58.5 | 61.3 | 35.9 | 3.3  | 2.1 | 61.9 | 64.0 | 32.7 | Dank-     |   |        |
| Jews                 | 4.6  | 2.7 | 50.6 | 53.3 | 42.1 | 3.9  | 3.3 | 49.4 | 52.7 | 43.4 | meijer.   |   |        |
| Chilean              | 4.8  | 4.4 | 54.5 | 58.9 | 36.3 | 7.8  | 3.7 | 56.4 | 60.1 | 32.1 | Cummins-  |   |        |
| Spanish.             |      |     |      |      |      |      |     |      |      |      | Midlo.    |   |        |
| Portu-<br>guese.     | 4.2  |     |      | 68.6 | 26.9 | 5.9  |     |      | 72.4 | 21.5 | Henchel   |   |        |
| Danes.               | 5.4  | 5.5 | 59.3 | 64.8 | 29.8 | 7.5  | 4.4 | 61.9 | 66.3 | 26.2 | Bugge.    |   |        |
| Russians.            | 6.2  |     |      | 61.7 | 32.1 | 8.4  |     |      | 64.3 | 27.3 | Seme-     |   |        |
| Portu-<br>guese.     | 6.1  |     |      | 67.0 | 26.9 | 6.7  |     |      | 66.0 | 27.2 | nowsky.   |   |        |
| Germans.             | 6.7  |     |      | 67.1 | 26.3 | 8.1  |     |      | 64.9 | 27.0 | Lopes     |   |        |
| Dutch &<br>Belgians. | 6.8  | 5.9 | 61.5 | 67.4 | 26.5 | 8.0  | 4.6 | 63.2 | 67.8 | 24.2 | Piebenga  |   |        |
| Dutch.               | 7.7  | 5.4 | 60.7 | 66.1 | 26.2 | 9.6  | 3.7 | 63.2 | 66.9 | 24.2 | Dankmei-  |   |        |
| Efe'                 | 15.9 | 2.8 | 61.6 | 64.4 | 19.6 | 17.0 | 2.0 | 60.7 | 62.7 | 19.6 | jer.      |   |        |
| Pygmies.             |      |     |      |      |      |      |     |      |      |      | Dankmei-  |   |        |
| Negroes.             | 5.5  | 3.3 | 62.2 | 65.5 | 28.8 | 8.5  | 2.2 | 61.4 | 63.6 | 27.9 | jer.      |   |        |
| Angola-<br>Negroes.  | 6.7  |     |      | 67.5 | 25.7 | 5.1  |     |      | 64.9 | 29.9 | Sarmento  |   |        |
| Uraons.              | 4.8  | 4.6 | 50.4 | 55.0 | 40.2 | 8.5  | 5.8 | 55.4 | 61.2 | 30.3 | Verma.    |   |        |

From the above table (Table IV) sexual differences can also be seen in the appearance of the pattern type frequencies on the fingers. The difference is quite evident in my Uraon data (between the male (112) and females (65). Arch type occurs in 4.8 p.c. (54) among the males and 8.5 p.c. (55) among the females, radial loop comes in the percentage of 4.6 ( 52 ) among the males and in 5.8 ( 38 ) among the females.

Similarly, ulnar loop appears in 50.4 p.c. (564) among the males and in 55.4 p.c. (360) among the females. Thus there is a difference of 3.7 percent between the males and females in the case of arch pattern and of 6.2 percent in the case of loop patterns among the fingers of the Uraon males and females. But this difference becomes reverse in the case of whorl pattern. Here, the frequency of the whorl percentage is higher (.40.2) among the males than the females (30.3). The difference here comes to about ten percent (9.9). The graphical representation of the sexual difference, as shown below, will make it clear (Fig. I).

On comparison with other peoples in the table given above (Table IV) the Uraon data comes a little nearer the Negro data even in sexual differences with regard to the three finger pattern types. Interestingly enough, the females of the Uraons and the Negroes come very near in the percentage of the occurrence of the patterns on the fingers. Quite interestingly these data also compare well with those of the Chilean Spanish.

In Table V given below, I have given comparative frequencies of percentages of the three pattern types (whorl, loop and arch) among different people of the world, including the results of my own investigation.

TABLE V.

| People            | Loop  |        |       | Total | Arch | Authors          | Material |
|-------------------|-------|--------|-------|-------|------|------------------|----------|
|                   | Whorl | Radial | Ulnar |       |      |                  |          |
| Japanese.         | 45.18 | 4.2    | 47.65 | 51.85 | 2.62 | Furuse           | 1528     |
| Japanese.         | 43.6  | 3.2    | 50.4  | 53.6  | 2.8  | Hasebe           | 276      |
| Chinese.          | 51.5  | 2.7    | 43.7  | 46.4  | 2.0  | Abel.            | 70       |
| Chinese.          | 50.66 | 2.6    | 45.03 | 43.69 | 1.4  | Kubo.            | 300      |
| Koreans.          | 49.2  | 3.7    | 43.9  | 47.0  | 3.1  | Miyake           | 134      |
| Koreans.          | 45.18 | 3.15   | 48.71 | 51.86 | 2.62 | Kueo.            | 700      |
| American Indians. | 42.0  | 2.6    | 52.9  | 55.5  | 2.3  | Cummins.         | 37       |
| Eskimos.          | 72.2  | 0.7    | 26.2  | 26.9  | 0.8  | Abel.            | 68       |
| Ainus.            | 31.8  | 3.8    | 61.4  | 65.2  | 2.9  | Hasebe           | 55       |
| Negroes.          | 38.9  | --     | --    | 57.3  | 3.6  | —                | —        |
| Hungarians.       | 32.3  | 3.6    | 59.1  | 62.7  | 5.0  | Bonnevie         | 833      |
| English.          | 26.0  | --     | --    | 67.3  | 6.5  | Galton.          | 500      |
| Norwegians.       | 25.65 | 5.81   | 61.14 | 66.95 | 7.4  | Bonnevie         | 24518    |
| Italians.         | 36.46 | 4.44   | 54.00 | 58.44 | 4.72 | Falko.           | 1579     |
| Indians           | 36.1  | 2.7    | 59.2  | 61.9  | 1.6  | Schlagin Haufen. | 27       |

|                         |       |      |       |       |      |         |     |
|-------------------------|-------|------|-------|-------|------|---------|-----|
| *Indians.               | 42.5  | 2.75 | 52.5  | 55.25 | 2.25 | Biswas, | 40  |
| *Sikhs<br>(Indians).    | 41.01 | 0.9  | 54.73 | 55.63 | 3.34 | „       | 57  |
| *Santhals<br>(Indians). | 38.8  | —    | —     | 57.2  | 4.0  | „       | 25  |
| Uraons<br>(Indians).    | 36.6  | 5.1  | 52.20 | 57.3  | 6.1  | Verma.  | 177 |

The above table brings an interesting fact to light. Here in the Table I have found my data very much in conformity with the Santhal data. Between the Uraons and the Santhals very close similarity<sup>1</sup>, in the frequencies of finger pattern types, exists. This gives a clue to the similarity in the racial basis of the two groups of the primitive people living in a particular aboriginal belt of India. The comparative table also shows that in the occurrence of whorl, loop and arch the Negroes stand very near the Santhals and Uraons.

This becomes quite clear in the following table:—

TABLE VI.

| People         | Whorl | Loop   |       |       | Arch  | Author |
|----------------|-------|--------|-------|-------|-------|--------|
|                |       | Radial | Ulnar | Total |       |        |
| Indians        | ...   | 36.1   | 2.7   | 59.2  | 61.9  | 1.6    |
| Indians        | ...   | 42.5   | 2.75  | 52.5  | 55.25 | 2.25   |
| Sikhs (Indian) | 41.01 | 0.90   | 54.73 | 55.63 | 3.34  | „      |
| Santhals       | ...   | 38.8   | ...   | 57.2  | 4.0   | „      |
| Uraons         | ..    | 36.6   | 5.10  | 52.20 | 57.3  | 6.1    |
| Negroes        | ...   | 38.9   | ...   | 57.3  | 3.6   | ...    |

There is very little difference in the case of whorl among the Santhals, Uraons, and Negroes. Loop percentage closely resembles the Negro data with little difference in the case of arch type. With regard to the other Indian data (in comparison) difference exists among my Uraon results and those of the other Indian data. This difference in the appearance of patterns on the fingers of the Uraons and the Indians in general (excluding the primitive tribes) confirms also the diversity of racial composition of the two groups.

#### Gene Frequencies.

The epidermal ridges on the fingers give us the knowledge of the

\*The figures of the Sikhs (Indian) and the Santhals (Indian) are from the unpublished work of Dr. P. C. Biswas.

1. The graphical representation of the patterns A,L,W between the Santhals and the Uraons is shown in Figure II.

70 GRAPHICAL REPRESENTATION OF PATTERNS  
A, L, W,  
AMONG THE SANTHALS AND THE URAONS

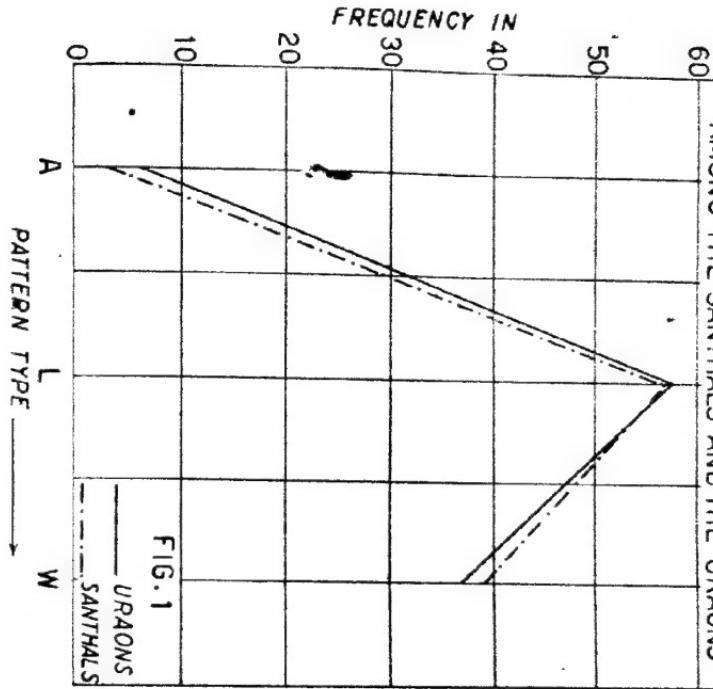


FIG. 1

— URAONS  
- - - SANTHALS

70 GRAPHICAL REPRESENTATION OF  
SEX-DIFFERENCE  
IN PATTERN-TYPE AMONG THE URAONS

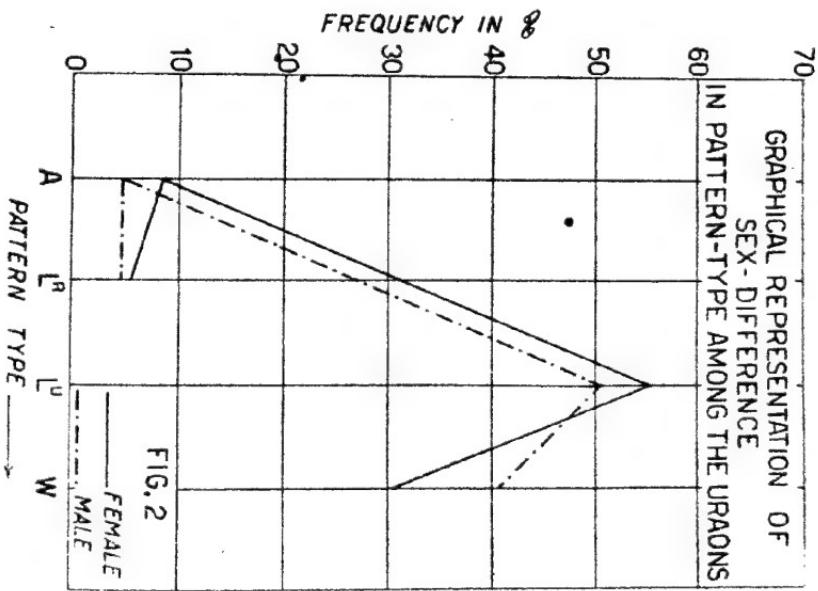


FIG. 2

— FEMALE  
- - - MALE

|                      |      |      |      |      |      |      |      |      |      |            |     |
|----------------------|------|------|------|------|------|------|------|------|------|------------|-----|
| Germans.             | 13.0 | 39.7 | 47.2 | 62.8 | 31.4 | 5.6  | 31.5 | 54.3 | 14.1 | Abel       | 161 |
| Dutch.               | 18.0 | 46.3 | 35.7 | 64.5 | 31.5 | 4.0  | 31.0 | 48.0 | 21.0 | Piebenga   | 400 |
| Flemish.             | 13.3 | 38.5 | 48.0 | 62.5 | 31.5 | 6.0  | 30.0 | 46.5 | 23.5 | Piebenga   | 200 |
| Germans.             | 15.7 | 44.5 | 39.8 | 54.8 | 38.5 | 6.7  | 28.0 | 55.0 | 17.0 | Karl       | 450 |
| Indians.             | 10.0 | 27.5 | 62.5 | 40.0 | 57.5 | 2.5  | 7.5  | 75.0 | 17.5 | Biswas     | 40  |
| Melanesians          | ...  | 53.0 | 47.0 | 26.5 | 61.8 | 11.7 | 11.7 | 79.5 | 14.8 | Karl       | 35  |
| Eskimos.             | ...  | (1)? | 98.0 | 32.2 | 42.3 | 25.4 | 23.0 | 57.0 | 18.0 | Abel       | 68  |
| Chinese.             | 4.2  | 21.4 | 74.2 | 52.8 | 44.2 | 2.5  | 31.4 | 54.2 | 14.2 | Abel       | 70  |
| Formosans.           | 12.3 | 41.0 | 47.8 | 44.3 | 50.3 | 5.5  | 30.5 | 58.8 | 10.8 | Okuma      | 400 |
| Chilean<br>Indians.  | 16.4 | 35.8 | 47.8 | 61.1 | 33.4 | 5.5  | 35.6 | 52.0 | 12.4 | Schaeuble  | 450 |
| Bushmen.             | 48.1 | 48.1 | 3.7  | 50.0 | 50.0 | ...  | 37.5 | 54.2 | 8.3  | M. Weniger | 27  |
| Sikh<br>(Indians).   | 5.3  | 39.3 | 55.4 | 48.3 | 46.4 | 5.3  | 39.3 | 55.4 | 5.3  | Biswas     | 57  |
| Uraons<br>(Indians). | 11.9 | 46.3 | 42.8 | 33.9 | 57.1 | 8.5  | 24.9 | 55.4 | 19.2 | Verma      | 177 |

The above table shows the comparative gene frequencies among different racial groups of the world. The homozygote (VV) is in highest percentage (48.1) among the Bushmen and the lowest percentage (4.2) among the Chinese. The Uraons with the percentage (11.9) come nearer Germans and Norwegians. They are also very much in accord with the Indian percentage (10.0). The radial homozygote (RR) is in highest percentage (70.0) among the Danes and lowest among the Melanesians. The Uraon RR percentage also comes little above the lowest (33.9).

The heterozygote (Vv) percentage is highest (53.0) among the Melanesians and the lowest (21.4) among the Chinese. The Uraons come nearer the highest percentage of the Melanesians. It is very interesting to find the Uraon percentage similar to the Dutch percentage and nearer Germans, Danes and even Bushmen. The radial heterozygote (Rr) percentage is highest (61.8) among the Melanesians and lowest (26.5) among the Danes. The Uraon percentage (57.1) comes closer to the highest percentage of the Melanesians. And it is similar to the Indian percentage (57.5). The homozygote (UU) percentage (39.3) is highest among the Sikhs (Biswas) and lowest (7.5) among the Indians (Biswas). Here the Uraon percentage (24.9) comes close to the Eskimos (23.0) and the Danes (26.8). Heterozygote (Uu) is in highest percentages (79.5) among the Melanesians and the Indians (75.0) and the lowest (42.9) among the Germans. The Uraon percentage (55.4) is in accord with the Sikhs percentage (55.4) and nearer Germans.

The thin epidermal (vv) percentage is highest (98.0) among the Eskimos and the lowest (3.7) among the Bushmen. The Uraon percent-

age (42.8) comes nearer the Germans (42.2) and the Danes (44.6). The recessive gene on the radial side (rr) comes in highest percentage (25.4) among the Eskimos and the lowest (1.1) among the Austrians. Again, the Uraon percentage (8.5) comes close to the Germans (8.0). The recessive gene on the ulnar side (uu) comes in highest percentage (27.3) among the Danes and the lowest (5.3) among the Sikhs. My data (19.2) comes nearer the Eskimos (18.0), the Austrians (18.6) the Germans (17.0) and the Indians (17.5).

From Table VII it is quite clear that frequency in percentage of the heterozygote genes is higher among the Uraons.

### Bibliography

- ABEL, W. :—Hand-und Fingerabdrucke von Feuerlandern. Zs. Morphol. u. Anthropol. 1934 Bd XXXIV. S. 15-20.
- BONNEVIE, K. :—Studies on Papillary Pattern on Human Fingers. Journ. of Genetics. XV. 1924.
- BISWAS, P. C. :—Über Hand-und Finger-leisten Von Indern. Zeitschr. f. Morphol. u. Anthropol. Bd. XXXV. 1936.
- BISWAS, P. C. :—Finger and Palmar Print of the Indian Juvenile Criminals. Science & Culture, Vol. XI, pp. 124-127, 1945-46.
- CUMMINS, H. and Ch. MIDLO :—Palmar and Planter Epidermal ridge Configuration (Dermatoglyphics) in European-Americans. Amer. Journ. of Phys. Anthropol. V. 9. 1926. S. 471-502.
- CUMMINS, H. and Ch. MIDLO :—Finger Prints Palms and Soles. Philadelphia, U.S.A. 1943.
- FISCHER, E. :—Versuch einer Genanalyse des Menschen. Zs. indukt. Abstammungs1. 54. 127. 1930.
- GALTON, SIR F. :—Finger Prints. MacMillan. London 1892.
- :—Finger prints directories. Mac Millan. London 1895.
- GEIPEL, G. :—Anleitung Zur erbbiologischen Beurteilung der Finger-Und Handleisten. J. F. Lahmanns Verlag. Munchen 1935.
- HASEBE, K. :—Über das Hautleistensystem der Vola und Planta der Japaner und Ainos. Arb. anat. Inst. Sendai. I. 13. 1918.
- KUBO, T. :—Beitrage Zur Daktyloskopie der Koreaner. III. Mitteilung. Mitt. med. Fac. Keyo. 2.117. 1918.
- SCHLAGINHAUFEN, O. :—Zur Morphologie der Palma und Planta der Vorderinder und Ceyloner. Zs. Ethnol. 38. 656. 1906.

14. SCHWALBE, G. :—Über Ballen, Linien Und Leisten der Hand Strass.-burger med. Zeitg. 2.49.1905.
15. WILDER, H. H. and WENTWORTH :—Personal Identification, Boston. Badger 1918.

## OFFERING TO THE MANES (*Sraddha*) AMONG THE AGRIAS OF SUNDARGARH, ORISSA

By *Nityananda Pattanaik*

THE Agrias are a scheduled caste of thriving agriculturists inhabiting the district of Sundargarh, Orissa. They are concentrated in Gangpur. It is said that they wore the sacred thread at one time, but this was given up when they took to agriculture. Some of them claim that they originally came from Agra ; but others say that their name comes from *Ag* or fire. During marriage among one section of the Agrias, offerings are made to bellows.

These people make offerings to the manes for about a fortnight in the month of Aswin (Sept -Oct.), when the departed spirits are welcomed to the house. The offering or *sraddha* to a particular person is made on the *tithi* or particular day of the moon when the person in question died. I observed the ceremony in the houses of Dambarudhar, Bisikesan and Avimanyu and Iswar in the village of Kaintra under police station Bhasua. This village is situated at the confluence of the river Ib with the Safei and is ten miles to the south of Sundargarh town. The persons named above are related closely to one another, but they live separately. \*

The offerings are made as per list given below.

| Names of persons to whom offerings are made by Dambarudhar, Bisikesan and Avimanyu | Names of persons to whom offerings are made by Iswar |
|--|--|
| 1st  | ...  |
| 2nd  | ...  |
| 3rd  | Mānbodh  |
| 4th  | ...  |
| 5th  | ...  |
| 6th  | ...  |
| 7th  | ...  |
| 8th  | ...  |
| 9th  | Jayakumari & Gauri                                   |
|  | Raghunath  |
|  | Akbar  |
|  | Birbal   |
|  | Dibyasing  |
|  | ...  |

|      |                        |     |
|------|------------------------|-----|
| 10th | Ramchandra             | ... |
| 11th | ...                    | ... |
| 12th | Lambodar               | ... |
| 13th | Bhuban                 | ... |
| 14th | ...                    | ... |
| 15th | All departed ancestors | ... |

On days when no ceremony has to be performed, the wife of the head of the family only cleanses the kitchen and its attached verandah and surroundings by besmearing it with cow-dung early in the morning. She then places twenty heaps of sundried rice mixed with the *moog* pulse on the ground below the verandah of the kitchen. Wreaths of flowers are placed over the heaps of rice. Then a water vessel, with a twig of a tree, generally used as tooth-brush, is also placed there, along with a betel leaf and nut. Incense is then burnt at the spot.

On sraddha days, which can be found from the table, the families have to do something more. The Brahmin priest reads his sacred formulas and performs the sraddha ceremony within the kitchen. When the ceremony is over, he is offered a hearty meal of parched rice, milk and country sugar. He is also offered uncooked rice, vegetables and a piece of new cloth at the time of departure. The head of the family offers cooked rice to the manes inside the kitchen. Then villagers of various castes are invited to a dinner of rice, pulses and vegetable curry.

On the last day, i. e. the 15th day of the moon, the Brahmin priest is called upon to perform sraddha in honour of all the departed ancestors. The latter are offered cooked rice, pulses, curry and cakes. After they have been duly propitiated, prayers are made for their departure. For this purpose, a Gour or milkman is called to the house. He cajoles the ancestors, and then shows them the way out of the house upwards, i. e. towards the region from which they came.

The salient features observed in connection with the sraddha ceremony are listed below :

1. Ploughing on the actual days when the sraddha is taking place is strictly forbidden. The families of Dambarudhar, Bisikesan and Avimanyu refrained from ploughing on the 3rd, 9th, 10th, 12th, 13th and 15th. Iswar did so on the 5th, 6th, 7th and 8th.

2. Although the three families of Dambarudhar, Bisikesan and Avimanyu have been living separately for a long time, yet they perform ceremonies in honour of their common ancestors. Avimanyu performs

the sraddha of his father Lambodar, while Dambarudhar and Bisikesan also perform ceremonies in the name of the latter.

3. Although Iswar is an agnate, yet he does not act in common with the families named above. Iswar does not participate in any religious performance done by the three families, and vice versa.

4. Shaving the beard or cropping the hair during the fifteen days is strictly forbidden.

5. Clothes are also not sent for washing to the washerman during the fortnight ; this is done only when the period is over.

6. There is no restriction attaching to fish or meat during these days however. They are taken without any hesitation.

7. The assistance of the milkman in coaxing the ancestral spirits away from the house after the ceremony is over is a very curious phenomenon.

The question may be asked as to why the four families do not perform ceremonies in honour of all the ancestors in common, although they are all related to one another. In trying to answer the question, I came to the following conclusions.

The month of Aswin, and specially the first fortnight, is the proper time for sowing *moog* pulse in the uplands where gora paddy is cultivated. This paddy is harvested in Vado, August-September, and the land remains damp till the next month, Aswin. If the soil is allowed to dry up, it hampers ploughing as well as the germination of the pulse. Brinjal plants are also transplanted during Aswin. Both of these crops are very important ones in Sundargarh. If Dambarudhar, Bisikesan and Avimanyu had been tied up with the ceremony all through the fortnight, it would have caused them a loss. This is why the three families perform ceremonies in honour of closely related ancestors, and leave out those for whom Iswar makes his own offerings. Comparative impoverishment during recent times may also have been responsible for reduction of socio-religious ceremonies.

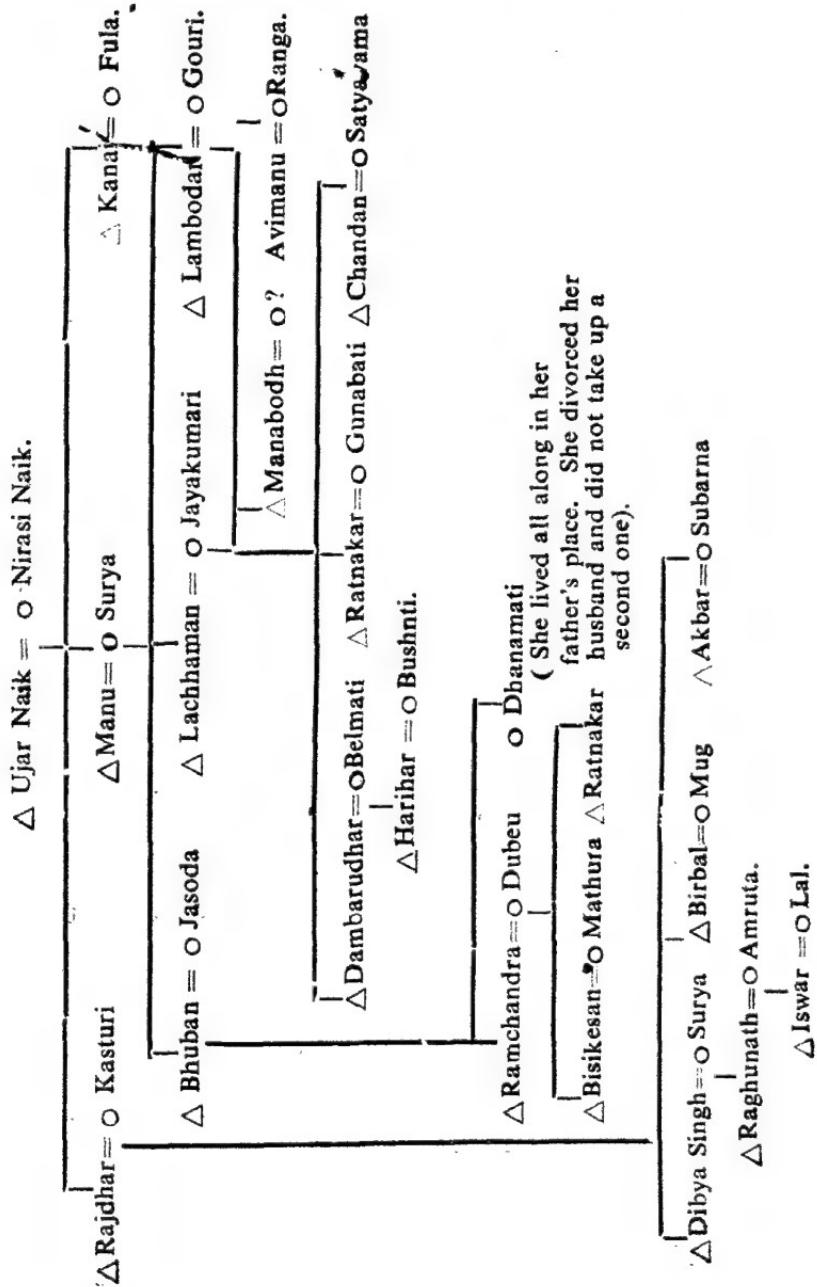
Geneologically, the three families of Dambarudhar, Bisikesan and Avimanyu are closer to one another than they are to Iswar. The house of Iswar is at some distance from those of the three, who reside within one building but separated by narrow partition walls. Iswar is the secular headman or *gauntia* of the village, as well as its richest inhabitant. He is not on very good terms with his relations. The co-operation between the three families is also very close in all matters. Whenever there is shortage of food or money, the three help one

another, rather than go to Iswar for a loan, or for that matter to any other man in the village.

The degree of attachment between members of the three families may now be studied in detail. The family of Avimanyu is not on such close terms with the rest as are the families of Dambarudhar and Bisakesan with one another. One reason may be that the female members of Avimanyu's family are rather quarrelsome.

From an analysis of the sraddha ceremony and associated facts, we may draw the following general conclusions :—

1. Economic factors may weaken the bonds arising out of genealogical relationship.
2. Distance in residence may weaken the bond of kinship co-operation.
3. There exists a correspondence between one aspect of culture and another. Change in one may bring about change in another.



# THE DISTRIBUTION OF BLOOD GROUPS AMONG THE BHOTIAS OF THE ALMORA DISTRICT, UTTAR PRADESH

*By S. C. Tiwari*

**D**URING the winter of the year 1951-52, blood grouping investigations were carried out among the Bhotias of Almora District at Dharchula ( $29^{\circ}52'$ , :  $80^{\circ}32'$ ). Dharchula is the terminus of the main trade route between Western Tibet and India. Throughout the winter when snow covers their territory, Bhotia merchants and other inhabitants from Byans, Chaudans and Darma valley, arrive there everyday with ponies, sheep and yaks bringing wool and other commodities. Bhotias import wool, yak-tails, shawls, carpets, hides, borax, salt, musk, medicinal herbs and other Tibetan commodities into India and western Nepal and export cloth, sugar, *gur*, cigarettes, matches and fancy goods from India to Tibet and western Nepal. Bhotia's, particularly those of the Darma, Byans and Chaudans, possess pronounced Mongolian features.

The data includes Bhotias from Johar, Darma, Byans and Chaudans. Some of the school children between 8 and 12 years from Garbiang and Kuti Primary School are also included in this data.

**TABLE I**  
**Distribution of Blood Groups among the Bhotias.**

| Location.              | No. of persons | % in each Group |       |       |       | Frequencies |      |      | D     | 6      | D/6  |
|------------------------|----------------|-----------------|-------|-------|-------|-------------|------|------|-------|--------|------|
|                        |                | O               | A     | B     | AB    | p           | q    | r    |       |        |      |
| Dharchula<br>(Almora). | 144            | 26              | 22    | 73    | 23    | .152        | .404 | .425 | 0.019 | 0.0205 | 0.92 |
|                        |                | 18.06           | 15.28 | 50.79 | 15.97 |             |      |      |       |        |      |

From the above table it can be seen that Bhotias are characterized by a notably high frequency of group B with very low O and A. Their AB is significantly high (15.97%) like that of the Tibetans<sup>1</sup> (24.1%) and Tharus<sup>2</sup> (18.33%). The percentages of the Blood Groups A (15.27%) are nearly equal in Bhotias. Further, high preponderance of B over A is noticeable.

1. Macfarlane. Eastern Himalayan Blood-Groups, *Man*, 1937, 159.

2. D. N. Majumdar: *Races and Cultures of India*, p. 62. (Universal, Lucknow).

TABLE II

## Comparison of the Bhotia (Almora) Blood Group Distribution with other Himalayan People

| No. | Population.  | Locality                              | Nos. | O     | A     | B     | AB    | p    | q    | r    | Investigator |
|-----|--|---------------------------------------|------|-------|-------|-------|-------|------|------|------|--------------|
| 1.  | Hindus*, Gurkhas Garhwalis, Rajputs, & Jats, (Kumaonis). | N. W. India                           | 1000 | 31.30 | 19.00 | 41.20 | 8.50  | .149 | .291 | .559 | Hirschfeld.  |
| 2.  | Nepalese*  | Kalimpong.                            | 78   | 33.30 | 34.60 | 23.10 | 9.00  | .249 | .176 | .577 | Macfarlane.  |
| 3.  | Lepchas*   | Kalimpong.                            | 33   | 30.30 | 36.40 | 27.30 | 6.06  | .241 | .183 | .550 | Macfarlane.  |
| 4.  | Bhotias* (mixed with Lepchas, etc.).                     | Nepal, Bhutan, Sikkim and Darjeeling. | 85   | 36.47 | 27.07 | 21.17 | 15.29 | .241 | .203 | .604 | Macfarlane.  |
| 5.  | Bhotias* (born in Central Tibet.)                        | Tibet.                                | 80   | 38.75 | 36.25 | 20.03 | 5.00  | .234 | .134 | .622 | Macfarlane.  |
| 6.  | Tibetan.   | Gyantse.                              | 187  | 14.90 | 47.10 | 13.90 | 24.10 | .463 | .213 | .386 | Tennant.     |
| 7.  | Khasa Brahmin<br>Khasa Rajput<br>Artisan Castes          | Jaunsar.                              | 102  | 29.8  | 32.9  | 31.0  | 6.3   | .246 | .234 | .546 |              |
|     |  |                                       | 118  | 33.8  | 31.7  | 26.2  | 8.3   | .228 | .193 | .581 | Majumdar.    |
|     |  |                                       | 126  | 28.1  | 22.4  | 40.1  | 9.4   | .180 | .295 | .530 |              |
| 8.  | Bhotias (Almora).  | Dharchula.                            | 144  | 18.06 | 15.27 | 50.69 | 15.97 | .152 | .404 | .425 | Tiwari.      |

\* B. K. Chatterjee and A. K. Mitra — Blood Group Distributions of the Bengalis and their comparison with other Indian Races and Castes, *Indian Culture*, Vol. VIII, Nos. 2/3.

3. D. N. Majumdar, *The Fortunes of Primitive Tribes* — p. 117.

In the above table we find that the mixed group of Hindus (which includes three neighbouring people of the Bhotias viz. Gurkhas, Kumaonis and Garhwalis) reported by Hirschfeld show high frequency of B (41.02 per cent). In all the neighbouring people of the Bhotias we find high percentages of B though A preponderates over B. High concentration of B in Jaunsar area is also noticeable. The table also shows high value for AB in Bhotias (mixed with Lepchas, etc.) Tibetans and Bhotias (Almora) as 24.10 per cent 15.29 per cent, and 15.97 per cent respectively. The frequency of O in my data for Bhotias is 18.06 per cent and such low O we find only in Paniyans<sup>4</sup> (20.00 per cent), Thado Kuki\* (19.30 per cent) and Tibetans, (14.90 per cent).

It seems to me quite feasible that high frequency of group B and AB in Bhotias may be due to intermixture. The nearest neighbours of Bhotias in Tibet, Nepal, Kumaon, Garhwal and Jaunsar are fairly high in B. For a good many years Nepalis held sway over the whole of Kumaon, Garhwal and the adjoining region before British occupation. As befits an enterprising trader, the Bhotias are naturally endowed with good behaviour and adaptive nature with their neighbouring people and this contact has had its influence over this community. From the nature of their occupation they allowed marriages and extra-marital relationships in the past as well as present<sup>5</sup>. Their social institutions, specially Rambang<sup>6</sup>, makes sufficient allowance for intermixture with their neighbouring people.

#### Sex difference in the Blood Group frequencies of the Bhotias.

It is desirable to mention the sex-difference noticed in the Bhotia's blood groups. The above data of 144 individuals includes 38 women.

In the table below we find proportionately more women having O blood group (26.31 per cent) than men (15.09 per cent) and more men possessing blood group A (16.98 per cent) than women (10.53 per cent). The difference in the proportion of B and AB in men and women is not much.

4. Aiyappan, A — Blood Groups of the Pre-Dravidian of the Wynad Plateau. *Man*, XXXVI 1936, pp. 191-194.

5. Trading communities are, as a rule, clannish in their behaviour. This is exemplified by the Jews or even Marwari community in India. It is therefore curious that the Bhotias should mix their blood rather freely in the Himalayan region. *Editor*

6. The Rambang of the Bhotias of Almora is like a village club where unmarried men and women are allowed. As is to be expected, this institution leads to the freest intimacy and sexual relationships. The Rambang like the dormitories elsewhere, offers hospitable welcome to the visitors. This institution is gradually disappearing through the efforts of social reformers.

TABLE III

| Sex.   | No. of Individuals<br>typed | O     | A     | B     | AB    |
|--------|-----------------------------|-------|-------|-------|-------|
| Male   | 106                         | 15.09 | 16.98 | 51.89 | 16.03 |
| Female | 38                          | 26.31 | 10.53 | 47.37 | 15.79 |

The difference in the blood group O and A of the Bhotia male and female is significant. It seems probable that population movements into Bhotia territory from Nepal having different blood group frequencies, particularly O and A, a movement unequal as between the sexes, could produce such an effect. However, a larger sample is necessary to give a good statistical fit to the above data.

## SOMATOMETRY OF THE PAROIS OF JESSORE, BENGAL

By M. N. Basu

THE anthropological subjects measured (in 1946) consist of 400 adult male Parois of Jessore, Bengal—a fishing caste. 17 somatoscopic observations and 16 somatometric measurements were made by the author. From these data an attempt has been made to study their racial position.

The somatoscopic observations taken on them are as follows :—skin colour ; hair form, texture, quantity and colour ; beard and moustache ; eye-brows ; eye-slits ; eye colour ; fore-head; supraorbital ridges ; nasion depression, nasal bridge ; nasal septum ; prognathism ; lips ; chin, angles of lower jaw and body.

The somatometric measurements were taken according to the methods adopted by Martin and they have been studied in the light of modern principles of statistics. The measurements taken are as follows : head length ; head breadth ; min. frontal diameter; bizygomatic breadth; bigonial breadth ; nasal height ; nasal breadth ; total facial length, external orbital breadth ; orbitonasal curve ; horizontal circumference of the head ; head vault, head height, height vertex, sitting height vertex.

The colour of the skin was observed in every male by exposing the inside of the arm and the fore-head. The colour ranges from tawny white to dark (16-32), majority being dark brown (27-32) (according to von Luschan's skin colour chart).

From hair it is seen that they are a wavy haired (cymotrichous) people. Hair colour is black, 94%, though dark grey are often found. Hair growth and texture are medium, 73 and 75 being their percentages respectively. On the face the growth of hair is normal. On the eye-brow the growth is scanty.

Eye-slit is horizontal or straight. Oblique slit and eyefold are not met with. The colour of the iris is black, 50%, dark brown also occurs largely, 42.5%, and the blue colour is also markedly present, 5.5%. As regards eye colour, Dr. Guha\* reports that the majority of the Bengalis

\* Guha B. S., Census of India 1931, vol I. part III Ethnographical.

examined by him have got dark brown eyes (Nos. 2 and 3 of Martin's eye colour chart). Dr. Guha also adds "the Pods have either black or dark brown eyes ; and there is a small percent of light clear brown (Nos. 6 and 7) among both the Brahmans and the Kayasthas." The conjunctiva among the Parois is clear, 80%, though yellow and reddish are not unknown.

The forehead is moderately medium, 81%, though it is not uncommon to meet with high, broad, low and narrow foreheads.

The supra-orbital ridges are not marked and remain imperceptible in majority of cases, though traces are not rare.

The nose is generally straight, 51%, though convex noses, 35%, are not an infrequent occurrence. The concave and concavo-convex also occur in small numbers. The nasion depression is medium, 78%, though there are fair percentages of deep, 12%, and shallow, 10%, roots. The nasal septum is horizontal, 55%, though downward directions, 39%, occur.

Alveolar prognathism is absent in the majority of cases, 97%. The facial prognathism is slightly more in evidence than alveolar prognathism. The lips tend to be slightly greater in fullness than among Bengalis in general but never approaches the thickness of the Negro. In general the lips are medium, 87.5%, with no eversion, though thinness and thickness occur. Their percentages are 10 and 25 respectively.

The chin is generally prominent, 89.5%, and oval, 84.5%. Sometimes fair percentages of pointed, 7.5% and round 7% chins are also met with. The angles of the lower jaw are generally medium, 97.5%, in nature.

The Parois are well-proportioned and muscular. The body-musculature is well marked.

A chart consisting of stature, cephalic index and nasal index after Haddon is given below :—

|         |      |
|---------|------|
| S D P * | 7.5% |
| S D M 1 | 2.0% |
| S D L   | 2.5% |
| M D M 1 | 1.0% |
| M D L   | 1.5% |

\*S=short, M=Medium=Tall ; D=Dolichocephalic, m=Mesocephalic,

B=Brachycephalic, P=Platyrrhine,

M1=Merorrhine, L=Leptorrhine.

|         |       |
|---------|-------|
| T D M 1 | 1.0%  |
| T D L   | 0.5%  |
| S m M 1 | 46.0% |
| S m L   | 10.0% |
| M m M 1 | 9.0%  |
| M m L   | 7.5%  |
| T m M 1 | 2.5%  |
| T B M 1 | 2.0%  |
| T B L   | 3.0%  |
| M m L   | 4.0%  |

According to Dr. Haddon, the characters, short and medium stature, dolichocephalic and platyrhine elements are identified with the Pre-Dravidians. He further adds that the Dravidians are characterised as short or medium statured dolichocephalic leptorrhine. The pure type of Haddon's Pre-Dravidians is present among the Paroisi. But a blend between the Pre-Dravidian and the Dravidian stocks may probably be identified with short and medium stature, dolichocephalic and mesorrhine nose. Here in the case with the Paroisi it is found that the blend of the Dravidians and the Pre-Dravidians as mentioned above are present 3.0%.<sup>1</sup>

Again it is found that short and medium stature mesocephalic and mesorrhine elements are present. The percentage is 55.0. This may be identified as a result of inter-mixture between the Pre-Dravidian and the Dravidian elements on the one hand and an Alpine or a Pamirian element on the other.

The character tall or medium stature, brachycephalic and leptorrhine nose belong to the *Homo Alpinus* of Lapouge. The Alpine element is found to be 7%. Thus it is seen that the Paroisi group is highly mixed.

"Coming directly to the somatology of the people of Bengal, it is to be found that the Bengalees are on the average mesocephal-mesorrhine medium sized persons"<sup>2</sup>. But from the actual data it is found that the Paroisi of Jessore, Bengal are a predominantly short statured mesocephalic and mesorrhine people.

1. We do not know what the author means by 'Dravidians' D. N. M.

2. Datta, B. N.—Peoples & Castes of Bengal,

*Science and Culture*, Aug 1936 P. 74

## A NOTE ON SOME FOLK AGRICULTURAL RITES

By S. R. Das

MANY are the folk rites observed in different parts of India for bumper agricultural produce. In this paper an attempt has been made to refer to some of such rites as *Itu-puja-vrata*, *Saspava-vrata*, *Tilkujari-vrata*, *Kartika-puja-vrata* of Bengal and a few others of other parts of India. An analysis of these rites shows that the agricultural problems concerning particularly the fertility of the soil and good harvest are solved by the performance of some sorts of magical rites.

*Itu-puja-vrata*—*Itu* is the sun; it is again Surya's *ghata* (sun's earthen jug). In some parts of Bengal the term used is *Ithu*. Both *Itu* and *Ithu* appear to be corrupt forms of *ritu* i. e. season or *mitu* which is again a corruption of the Sanskrit term *Mitra* i. e. sun. Sun is one of the earliest gods and his worship is even older than the *Rigveda*. *Mitra* is one of the *Adityas*, and from the Puranas we learn that *Mitra* is the *Aditya* of the month of *Jyaishtha* (May-June) and *Varuna* of *Ashadha* (June-July). It is not unlikely that later on *Mitra* became associated with the *Aditya* of the month of *Agrahayana* (Nov-December) as we have *Mitra-saptami* in this month. It is very significant that this rite is observed in the month of *Agrahayana* when *rabi-sashya* or winter crops are sown in the field.

This rite is inaugurated on the *sankranti-day* (last day of the month) of the month of *Kartika* (Oct.-Nov) and continued during the whole month of *Agrahayana*, sometimes on Sundays only; Sunday being particularly associated with the sun. Seeds of *matqr*, *kalai* (pulses) and paddy are sown in loose earth placed on an earthen plate or saucer (*sara*) followed by spraying of water. Then an earthen jug (*ghata*) is placed on the earthen saucer along with some water and creepers like *helenche*, *kalmi*, *susni*. In some places, as in the district of Burdwan, besides the above noted articles, paddy-plant, turmeric-plant, *mankachu*-plant are also planted around the earthen jug. In other places again, four earthen pots are placed on earthen saucers with bare earth, and seeds of barley, paddy, etc. are sown. These are watered and allowed to germinate over the whole month. The rite is closed by the

performance of a *sadh* (a feminine term to mean *grihya-rites* of *Simantonyana*). In still other places the earthen jugs are coloured and painted with the representations of *Itu*, the sun; these are called *Itubhand* or sun-god's earthen ware. *Panchasashya* or five kinds of grains i. e. barley, pea, *phaseolus radiatus* (*mash-kalai* pulse), *phaseolus suratus* (*mug* pulse) and mustard are placed on earthen saucers and are allowed to sprout by being watered regularly. The jugs are then placed on the earthen saucers.

The observance is continued on each Sunday in the month of *Agrahayana*. It mainly consists of chanting of *chhadas* or incantations in which the merits of the rites have been described as :—

The poor get wealth,  
The childless gets a child,  
The aged bachelor gets a wife,  
The blind gets eyes  
(And) depart to heaven after death.

In the *chhadas* thus no reference has been made to harvest, though the rite is apparently meant for it. The observance is concluded by narrating the *Vrata-katha* which explains the origin of the *Vrata* and its efficacy<sup>1</sup>. After the completion of the rite the jugs and saucers with the plants grown are thrown into a pond. In some places, only the saucers and not the jugs are thrown.

Such a practice is better illustrated in another rite called *Saspavratā* which is also very common among women of Bengal. It is inaugurated on the *Maithuna-shashthi* of the month of *Bhadra* (August-Sept.) and continued up to the next *Sukla-dvadasi* of the month. On the 5th day, five kinds of grains such as *matar*, *mug*, *arahar* and *chhola* are put in an earthen pot with water. On the next day a portion of it is offered as a *naivedya* to the goddess *Shashthi* and the remainder is put on a new *sara* with mustard seeds and loose earth from a hole. Every day after bathing, a little water is poured on it. After five days sprouts become visible when women think that there would be no dearth of paddy or grain in the year. Accordingly they then arrange a paddy festival on the night of the *Indradvadasi*-day. The girls of the quarter

(1) There are five different versions of the *Katha* current in different parts of Western Bengal. It is highly interesting to note that one of these stories was once very widely current in Bengal. It has been included in one *Suryer-panchali* written by Ramjivan Bhattacharya, an English translation of which has been made by S. C. Mitra and published in the Journal of the Department of Letters, 1927, pp. 151-57.

arrange their respective earthen saucers around an altar made in a central place, and all girls from the age of 5 to 20 dance round it singing songs. During the whole night they sing and dance and with the dawn each of them takes her respective saucer and goes to a pond or river for throwing them into water.

Almost a similar rite is observed in Eastern Bengal called *Tilkujari-vrata* which is also observed in the month of *Bhadra*. This rite seems to be a replica of the *Saspata-vrata* of Western Bengal. In this rite clay is put on a small plantain-fibre (*khol*), and *til*, *dhan* (paddy), mustard, *mug* and *kalai* are sown. When the sprouts are visible, it is worshipped along with the chanting of the *chhadas*. This is locally called *ala*. In the *Kartika-puja-vrata*, which is also essentially an agricultural rite, similar demonstration of the paddy-plants is made in the courtyard generally. Lines are incised in the courtyard, and paddy is put in the incised lines which are then covered with earth. This place is kept moistened with spraying water till sprouts are visible. This is also locally called *ala* which is worshipped on the *Sankranti*-day of the month of *Kartika*.

Similar agricultural rites are also practised in other parts of India. Such a demonstration of the growth of sprouts is not also wanting. In Bihar the Brahmanas sow seeds in an earthen saucer in the month of *Bhadra* and water them daily. On the *Dasahara-day* (*Vijaya-Dasami* of Bengal) these seedlings or sprouts grown are uprooted and presented to the gentlemen who tie them to their scalp-locks and the women to their chignons<sup>1</sup>. This is done with the idea of having abundance of agricultural crops. In Gujarat "some earth is laid in the house chapel, and on its surface the grains are dropped." Earth is kept moistened and on the 10th day the sprouts are worshipped<sup>2</sup>. At marriage, thread-wearing and pregnancy ceremonies grains are sown in baskets which are worshipped daily and finally thrown into water<sup>3</sup>.

Again on the 6th day of the month of *Ashadha* (June-July) "Brahmin girls fill earthen dishes with loose soil from an ant-hill mixed with dry powdered cow-dung, and in this they sow wheat or barley seeds so that they would have sprouted before the great holiday of the girls, the *Molakata*, when they remain sitting in one place and eat nothing flavoured with salt<sup>4</sup>" Another type of agricultural rite called

(1) Man in India, Vol. XXI, 1941, p. 37

(2) Crooke, Religion and Folk-lore of Northern India, p. 258.

(3) Campbell, Bombay Gazetteer, Vol. IX, p. 392, Part. I

(4) Stevenson, Rites of the Twice born, p. 59; Crooke, p. 258

*Argha* is observed in the N. W. Frontier Province. It consists in placing on the "threshold at seed time, a cake of cow-dung formed into a lump, filling it with corn and then pouring water upon it". This practice is continued to propitiate the deities and to secure a good harvest<sup>1</sup>.

The Bhumij of Bankura in the first half of September observe a festival called *Karam* which is common among many non-Aryan tribes. It is observed for the growth of bumper crops. A branch of *karam-tree* (*mucuna parvifolia*) is planted in the centre of the village dancing ground, at the foot of which is placed a vessel partly filled with earth into which the unmarried girls of the village throw various kinds of seeds<sup>2</sup>. These are carefully tendered and watered for germinating and growing into sprouts. On the *Sankranti*-day the girls give these sprouts to each other and wear them in their hair. It is then followed by dancing which lasts for the whole night<sup>3</sup>. This rite is almost similar to the *Saspata* and *Tilkujari Vratas*, etc. Similarly the daughters of the Oroan headman make these seedlings grow and then offer them to the sacred *Karam-tree*. These are then presented to their friends to be worn in their hair<sup>4</sup>. The Gadabas of the South observe a similar festival called *Bali-jatra* in the agricultural seasons when in earthen dishes filled with ant-hill earth are sown nine kinds of grains which are watered and before which the rite is performed along with singing and dancing<sup>5</sup>. All these are done with the sole object of having ample agricultural produces.

It is also highly interesting to note that *Adonia* of Athens bear a strong resemblance to *Itu-puja-vrata* and similar other rites. In *Adonia* as well, rites are observed with pots sown with seeds which are forced to grow artificially<sup>6</sup>.

The common factor in all these rites is the demonstration of the growth of sprouts. Here the observers of the rites actually demonstrate the growth of paddy-plants. That is why they put grains in earthen saucers along with loose earth, and water is sprayed frequently so that earth may be moistened for the germination of sprouts. This is a practical demonstration of the growth of the paddy-plants and grains in a prepared miniature agricultural field. By observing rites

(1) Elliot, *Memoirs of the Races*, Vol. II. p. 197

(2) Risley, *Tribes and Castes of Bengal*, Vol. II. p. 125

(3) *Ibid.* p. 146

(4) *Man in India*, Vol. XI. 1931. p. 170

(5) *Man in India*, Vol. XXI. p. 34.

with the sprouts grown, the devotees expect to have abundance of agricultural produces. Four earthen pots used in *Itu-puja* in certain parts of Bengal seem to be symbolical of four seasons over which the sun presides and brings forth seasonal crops. The throwing away of the earthen pots or saucers into water may be interpreted as a charm to bring forth rain for the growth of vegetation. Here is a clear evidence of the performance of sympathetic magical rites. The girls practise these rites over miniature agricultural fields of earthen saucers where seeds are artificially made to grow. The performance of such a rite would ensure good harvest.

## THE ENUMERATION & TREATMENT OF TRIBES IN THE INDIAN CENSUS: A STUDY IN RETROSPECT

*By N. K. Syam Chaudhri*

THOUGH census operations in India began in 1872, a systematic and unified project was undertaken on an all-India basis only in the year 1881. Thenceforward, except at the last census in 1941, the general scheme and structure of classification initiated in 1881, remained almost unaltered. But since religion was the main criterion of classification, difficulties arose in respect of the tribal population. It will be seen that in none of the censuses the 'religion' returns of the aborigines were statistically correct. They were not classified as belonging to tribal communities inspite of the difficulties that arose every time in classifying them under a distinct religious category.

In all the sporadic censuses that were undertaken before 1881, the classification was into "Hindus" and "Muslims"; those who did not fall under either of these headings were called "others". In 1881, however, the scope of classification was elaborated into fourteen religions, amongst which the tribal section was described as following an "Aboriginal" pantheon. But the dubious character, as admitted by the then Commissioner, of this belief on the one side and the vagueness of the term Hindu on the other caused much disorder in separating the tribals as not adhering to the accepted Hindu tenets of particular localities; and in fact the Deputy Commissioner of Berar tended to extend the term Hindu "to the form of worship practised by the Gonds and other Aboriginal castes."

The caste statistics compiled in 1881 were not based on actual enumeration; they were a list arranged according to race, occupation and social standing, coming in open clash with the "Religion" returns. Thus, in Bengal 1,365,215 adherents of "Aboriginal" religion out of a total of 2,055,822 were classified as "Hindoo castes" under the sub-heading of "Aboriginal Tribes." Again, it must have been a matter of discretion of the compiler when he described, arbitrarily enough, 10,618,451 individuals as "Semi-Hinduised aborigines."

Whatever may have been the official attitude to this complex problem, whatever may have been the comprehensiveness of Hinduism,

all persons returning themselves as Hindus in the enumeration schedule were accepted as members of the Hindu religion; and inspite of the inaccuracies in the process of enumeration the total number of 5,426,511 persons of "Aboriginal" religion in 1881 as considered as underestimate.

In the succeeding census of 1891, except for the separation of "caste and sub-division" from religion by creating a distinct column, the main method of enumeration remained almost the same. The deliberation that preceded the operation emphasised the need for some clear instructions to be issued to the enumerators on the following points in respect of religion;

- (1) The discrimination between orthodox or Brahminic Hindus from such other offshoots as Brahmoism, Jainism etc;
- (2) The separation of the more localized semi-Hindu creeds from Hinduism;
- (3) The question of the return of the religion of the Forest Tribes, and
- (4) A general title for the religion of the non-Hindu section of the tribes.

The enumeration followed and the results were tabulated; but what had been the treatment of the tribal population on the stipulated points remained unaccounted and whether the return of over 1,000,900 Forest Tribes as "Animists" not accepting Hinduism, Islam or Christianity recorded an increase or was either an overestimate or underestimate of the tribal population could, thus, only be a matter of individual opinion.

The general items of classification remaining the same, Mr. Risley the Census Commissioner for 1901, advanced a case for "Animism" and sought to analyse it in detail, no matter how much removed it had been from the context of the process involved in the religion return. The relationship that exist between Hinduism and "Animism", according to Risley, may be tabulated thus :

**Pantheism or Hinduism proper <-> Popular Hinduism <-> Animism**

Subtle as the distinction is between "Animism" and Hinduism, it did not reflect itself in the process of enumeration and consequently in the statistical analysis that followed.

In the Punjab, obviously due to personal discriminations of the field-workers, the Chamars and the Churas were not shown as Hindus;

whereas in Baroda, of three quarters of a million of the Forest and Hill Tribes only 176, 000 were returned as adhering to "Animism," and in Bombay of 2,836, 000 tribals (Bhils, Kols etc) only 95, 000 were so enumerated. Curiously enough, the Central Provinces followed a totally different course by laying down that "when in doubt a man" should be asked if he worshipped Mahadeo; if the answer was in the affirmative he was classed as Hindu, and if in the negative as an animist." Thus, the return of over 8½ million of "Animists" in India in 1901 was not only dubious in itself but also the amount of error in the process of enumeration varied greatly in different provinces.

When considerations of "Caste, Tribes or Race" came in, Risley classified the various tribal groups on a geo-ethnic basis. The outline of the division was as follows:

- (1) The Dravidian Tribes, the Mundas, the Santals etc. occupying the tract of Chota Nagpur,
  - (2) the Mongolian Tribes inhabiting the Naga Hills region,
  - (3) The Turko-Iranian group of tribes, including such groups as the Afghans or the Pathans, being found in the N. W. F. P., and
  - (4) The Balochs and the Brahuis, being distributed in Baluchistan.
- Though this classification was not comprehensive and systematic, it, nevertheless, explored a new field opening new vistas; and it can be said that this was the first time when the tribals were viewed both from the ethnological and the ethnographical angles.

The general instruction that those who had no recognised religion should be classified in the column of the schedule for religion under the name of the tribe was also followed in the operation of 1911. But the difficulties remaining the same as before, the then Census Commissioner, Mr. E. A. Gait, tried a new method of distinguishing those non-Hindu castes and tribes which had been classified as Hindus by instructing the Census Superintendent to enumerate them on a basis of whether they confirmed or not to certain standard or underwent certain disabilities of Hinduism or not. The test was applied to those castes and tribes who

1. denied the supremacy of the Brahmans,
2. did not receive *mantras* from them,
3. denied the authority of the *Vedas*,
4. did not worship the great Hindu gods,
5. were not served by good Brahmans,
6. had no Brahman priest,

7. were denied access to Hindu temples,
8. caused pollution in various ways,
9. buried the dead, and
10. took beef and did not pay homage to the cow.

These criteria caused much inconsistency when they were applied to selected castes and tribes. The results showed that none of the tribes satisfied all the features at the same time. Again, while there are some communities, as for example, the Lingayats of Southern India who while denying the authority of the *Vedas* and the Brahmins could well come under Hinduism, the question as to why those tests were only applied to some selected castes and tribes remains open and controversial. But either for these inconvenience or for the commotion in the Press in 1910, these tests were not used in the final classification in subversion to the original instructions. Thus, whatever the explanation or treatment there might have been in 1911, the supposed Rubicon separating the Hinduized tribes from 10,295,168 "Animists"—about 3 per cent of the total population returned, remained uncrossed.

Since the census was accepted "as an attempt to record religion in its communal aspect, merely distinguishing those who lay claim to one or other of the recognized sectional labels without looking too closely to the validity of their claim"—the classification by religion held its sway in 1921, in the absence of any other suitable criterion, serving as a base for statistical returns necessary for administrative purpose. While it supplied exclusive returns in the case of Hindus, Muslims or Christians and others, the problem arose, as it had in previous censuses : How to distinguish the so called "Animists" from Hinduism.

Realizing this time, that the term "Animism" was not adequate to distinguish a separate religious category from Hinduism, Mr. Marten, the Census Commissioner, replaced "Animism" by "Tribal religion", not to stress the communal aspect but to find out the number of those tribals who had remained outside the pale of the Hindu communal system. But uncertain as the connotation of "Animism" has been the classification of all tribals who returned themselves as such under "Tribal religion" has equally been uncertain as to what it sought to denote, for the difficulties and problems encountered by the enumerators remained as before; so, this change, as it were, has been a change of name and not of content.

Considering, thus, the impossibility of showing in terms of statistics the general process of conversion, no exact picture of the change over

from "Tribal religion" to Hinduism can be gathered from the percentage of those tribals who returned themselves as "Animists" in previous censuses. The point will be best illustrated from the following table:

Percentage returned as Animists in

| Tribe  | 1921 | 1911 | 1901 |
|--------|------|------|------|
| Khond  | 82.7 | 75.1 | 95.9 |
| Savara | 59.0 | 70.0 | 86.7 |
| Yanadi | 46.8 | 64.7 | 11.9 |
| Poroja | 68.8 | 24.1 | 28.8 |
| Gadaba | 47.4 | 6.0  | 47.6 |
| Koya   | 12.0 | 33.6 | 16.8 |

Anyway, the number of those who were returned as being under "Tribal religion" in 1921 was about 23 million, and by deducting this from an estimated total of 16 million of those tribes (including Gonds, Santals, and Oraons) who were till then considered as inhabitants of the hills and forests, a rough calculation of 6 to 7 million Hinduized tribals was reached.

In 1931, apart from the theoretical consideration of the relationship of Hinduism with primitive religion in India, Dr. Hutton, the then Census Commissioner, made a more methodical classification of the primitive tribes discarding religious affiliations for the first time in Indian census. He realized the impracticability of the religious returns and made a suggestion to replace it by "community".

Though the census in 1931 was carried out according to the standard instructions of previous censuses, the compilation of anthropological data for administrative purposes—at least so far as they concerned the tribal population—was one of its main considerations. Particularly, from ethnographical and ethnological points all the report volumes on India have definite reference value for further work in India.

Commenting on a suggestion made on similar lines in 1941 "that the main object of the Indian census is anthropological" and that it "should be replaced by the work of trained Anthropologists", Mr. M. W. M. Yeatts, the Census Commissioner, declared that since Anthropology was a science which required high personal predilection it should be carried on year by year, rather than to limit it "into the constricted periods of a 10-yearly convulsion".

In 1932, column 8 of the census schedule supplied necessary information on "race, tribe or caste". This column was dropped in 1941, and the enumeration was based on the "limited" return of community

origin. As a result of this change, the total tribal return of 1941 has been rendered quite incompatible with that of 1931. Dr. Hutton basing his compilation on column 8 of the census schedule made a very apt and schematic classification of the population of primitive tribes in India. "The basic figure", he wrote, "indicating the total number of the primitive tribes is to be obtained from the Table XVII by adding together the total figures of groups I and III." These groups represented three cultural stages and after making some obvious adjustments in the scheme, he reached at 24,613,848 as the total population of the primitive tribes in India. But in 1941, there was no schematic classification on cultural advancement. Rather by showing community origin many of the groups that were not considered as primitive tribes in 1931 were included in Table XIV of *Census of India*, 1941, Vol. I. Some of the larger groups that have considerably increased the estimate of 1941 are indicated below:

| Groups               | Total number returned<br>in 1941 | Description given in<br>1931   |
|----------------------|----------------------------------|--|
| 1. Ahom              | 300,214                          | A well—advanced Hindu community on par with any other cultured group in India. |
| 2. Aheria            | 24,245                           | A depressed caste of hunters and fishers.                                      |
| 3. Bhuihar           | 23,991                           | Cultivating Brahmans.  |
| 4. Dhodia            | 154,860                          | Backward Hindu cultivators.  |
| 5. Dombo             | 124,911                          | Depressed caste.   |
| 6. Dubla and Talavia | 200,988                          | Backward Hindu cultivators.  |
| 7. Dusadh            | 77,456                           | Village watchmen and field labourers.  |
| 8. Ghasi             | 41,513                           | Cultivators and agricultural labourers.  |
| 9. Gurung            | 25,158                           | A group of Nepalis.  |
| 10. Jat              | 223,070                          | Landowning and cultivating class of Rajput group.                              |
| 11. Kami             | 24,769                           | The artisan and blacksmith caste of Nepal.                                     |

|                |         |  |
|----------------|---------|--|
| 12. Mangar     | 28,695  | A Hindu caste.   |
| 13. Khangar    | 22,835  | Depressed caste.   |
| 14. Meo (Mina) | 764,854 | Far too advanced to be regarded as primitive tribe.        |
| 15. Nat        | 41,898  | Depressed caste.   |
| 16. Pan        | 42,189  | Depressed caste.   |
| 17. Pasi       | 605,778 | Depressed caste of cultivators and agricultural labourers. |

Religion as a criterion for determining membership to a community was dropped in 1941. It is indeed important to stress the fact that where religion does not serve a concrete and dependable basis for ascertaining adherence to a particular community, it should be replaced. Specially where tribes are concerned, it becomes very difficult, perhaps impossible, to determine whether a particular individual is a Hindu or not. For centuries Hinduism has been in contact with the aboriginal population in India, and in course of time it has engulfed a vast number of aborigines by a gradual process of assimilation.

To sum up the whole picture, we find that all the attempts that were made to classify the aborigines as "Animists" or following "Tribal religions" ended in great confusion. The enumerators were also not sure as to how to put an aboriginal under the heading of 'religion' of the census schedules. Even, the criterion of community origin that was employed in the last census would not be of any great value, for we have no way of determining what kind of organization a group had before it came to be reckoned as Hindu. But if community origin is replaced by community organization more objective and uniform data could be gathered.

## THE CONFERENCE FOR TRIBAL WELFARE AT DELHI

*By K. P. Chattopadhyay*

A conference of anthropologists, social workers connected with tribal welfare work, tribal representatives in Central and State Legislatures and Government representatives, was held at Delhi on 7th, 8th and 9th June, 1952 in the Central Hall, Parliament House. Earlier, a Committee of Indian Conference of Social Work had met in Calcutta on 29th and 31st December, with Shri L. M. Shrikant, Commissioner of Schedules Castes and Tribes in the Chair. The Committee included among others Shri N. V. Bapat of Banavasi Sewa Mandal, Madhya Pradesh, Professor B. H. Mehta of the Tata Institute of Social Sciences, Bombay, Professor K. P. Chattopadhyay, Head of the Department of Anthropology, Calcutta University, Professor D. N. Majumdar, Lucknow University and several social welfare workers from Orissa, Assam and South India. A draft memorandum was discussed and adopted with important modifications. The Conference held at Delhi was considered by those invited, to be in a sense for the purpose of a critical discussion and final approval of the general principles and lines of work laid down in the memorandum. This view was confirmed when the invitees were requested to submit papers on practically all aspects of tribal culture and tribal problems which had been discussed in Calcutta in December and with regard to the method of utilization of the fairly substantial grant-in-aid from the Central Government under Article 275 of the Constitution. Summaries of papers were to be sent beforehand and the papers also were to reach the convener by 20th April. The summaries were to be circulated for comments to be sent in by 1st May. Actually the summaries reached invitees by 1st June for making comments. Arrangement for stay of delegates was made in cooperation with the Bharatiya Adimjati Sevak Sangh and the Delhi University. Charges for board were very moderate and excellent arrangements were made for transport between the University hostels and other delegates' camps and Parliament House.

The Conference was inaugurated by Dr. Rajendra Prasad, President of the Indian Republic. This was followed by an address by the Prime Minister and after him, by the Minister for Home affairs, who was

chairman of the conference. The concluding speech on the third day was by the Commissioner for Scheduled Castes and Tribes. The President in his speech indicated the broad general lines on which tribal welfare work was proposed to be followed. They roughly coincide with the recommendations made by the Committee of Scientists and Social Workers earlier. No reference however occurs in the inaugural speech to their labours or the help rendered by them in formulating principles and lines of work. The Prime Minister in his speech highly praised tribal folk and their culture and conveyed the impression that the approach to the tribal problem set out in his (and the President's) speech was opposed by anthropologists to whom he referred as looking upon tribals merely as museum specimens. This naturally evoked sharp protests later in the day when anthropologists were given the opportunity to express their views.

In the afternoon the session was reserved for papers on Tribal Education and dialects, by Social anthropologists, Tribal representatives, Government officers and Social welfare workers. Some of these delegates had submitted papers of which summaries had been circulated. Others had not however submitted any papers, and delivered speeches to some extent on the topics stated, but often wandering off into other realms. Again, no discussion was held on any paper. Nevertheless, speakers, whose turn came after the reader of a paper, sometimes indulged in criticisms of the same along with discussion of other speeches. Since those criticised had no opportunity of replying, the speeches took on the pattern of a debate in Legislature on the Governor's or President's address. The major purpose of such a conference, of exchange of ideas and discussion of problems was defeated by this procedure. A good deal of resentment was also created among those invited by the statement in the circular D. O. letter of the Commissioner that "very few papers are really a serious attempt at dealing with the subject" and hence many of the topics had been left out from discussion. The remarks were certainly unfortunate, the more so as several persons, including officials who had submitted no papers, were allowed to speak merely to display their ignorance of the major problems or to utter a few platitudes.

No concrete decisions were taken at the conference, and discussion of the policy of grants-in-aid in detail was ruled out.

Informative accounts were given by officials and some social workers, of the type of work being done in the different States. Specific

details were not however forthcoming in some instances. Also a common attitude of State officials seemed to be that the practice of teaching through the State language was justified even though in theory the medium should be the mother tongue. The tribals were described in the respective areas as "practically" speakers of the State language. It remains to be seen how far the directive of the President that "in the lowest classes the only language that can be used is the mother tongue of the child" will be followed in the States with large tribal populations.

On behalf of the tribal communities, Shri Jaipal Singh, the well-known Adibasi leader made an able speech criticising the present policy of the Governments in States (which do not fit in with what the President had said) and defending the anthropologists for their stand on behalf of the tribal communities. In general, this was the note sounded by tribal representatives, some criticising particular measures sharply, others praising the starting of schools and welfare centres in tribal areas. Although there were several spokesmen attached to schools and ashramas for tribal folk, they failed to mention that vegetarianism and certain cults of Hindu Society are being foisted through these centres on tribal folk in many areas.

The Conference left the impression on the minds of many delegates that the officials had decided on policies and programs and did not want a serious discussion of these by scientists and social workers. In the interest of tribal welfare and a proper solution of the very urgent and big problem of acculturation the procedure should be modified in future conferences to remove the defects noted. The meetings of different sections in the Indian Science Congress will furnish a suitable model both for papers and for symposia on particular topics.

Another point to which the attention of the organisers needs to be drawn is that while Governments of States and the Centre paid the expenses of the officials for attending the conference, the societies for welfare work had to bear it for their representatives out of their limited funds. State help should be rendered in this respect.

## MISCELLANEOUS CONTRIBUTIONS

*Notes:* (a) In 1929, we were at Monghyr during the Pujahs. On the day of immersion, i. e., the Dusserah day, we noticed that the Durgah image of the local Mehthars (sweepers) came first in the procession. This was followed by the Bada Durgah (Great Durgah) of the local Biharis, followed by Durgah images worshipped by individuals. On my query as to why the image worshipped by the Mehthars came first in the procession, the answer was that they were the first to worship Durgah in this part of the country; so their image comes first. Next in order of seniority is the Bada Durgah. The other images come in the strict order of seniority, i.e., the image of the Durgah Pujah started in 1870, say, comes before that started in 1871. And all the images which take part in the grand procession must be immersed at the Sijua Ghat of the Ganges.

The image of Durgah worshipped by the Mehthars had a further peculiarity in that it is not an ordinary or usual image of the goddess Durgah. It is that of blue Kali with Lakshmi and Saraswati on each side. Why it is so, no one could answer satisfactorily. Since then I have made several enquiries, but without much result.

An explanation may be suggested as to why the Mehthars were the first to worship Durgah in this part of the country. Of course, this is a mere guess. Many of the Muchis or cobblers found in Calcutta and north up to Halisahar, who speak Bengali fluently, come from Monghyr and visit their ancestral homes after intervals of three or four years even now. Some Mehthars also hail from Monghyr, but they do not seem to visit their homes. It may be that like the Muchis they used to come home to Monghyr in former times, and carried the Durgah Pujah to their home town.\*

(b) In 1945, we visited Sambalpur in Orissa. During the Pujahs we found several Durgah images of the usual type, but an image of

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\* In Bengal, Kali with Lakshmi and Saraswati is not worshipped anywhere in place of Durgah. So the origin suggested by Mr. J. M. Datta seems to be doubtful.  
—Editor,

Bhubaneswari was also worshipped during the three days by an Oriya Brahmin family.

Sambhaleswari, the titular goddess of Sambalpur, is said to be a representation of Bhubaneswari. But the image of Sambaleswari is an almost shapeless, featureless red stone image worshipped by the Kshatriya priests. The image of Bhubaneswari is a golden yellow image of a seated young damsel.

(c) In 1950, we visited Jubbalpore. There we found the image of Tara worshipped on the Asthami and Navami days of the Durgah Puja. The image was coal black unlike the deep blue images of Tara found in Bengal.

(d) Images of Durgah in Bengal are usually of golden yellow colour. But in some families and in some localities, images of Durgah are of orange colour. The Bijni Raj family in Assam worship an almost red image of Durgah. The Aravinda Vaidya families of Jessore and Faridpur worship orange-coloured images of Durgah.

This difference is said to be due to differences in the *dhyana* of the goddess. In one she is described as being yellow like the flower of *atasi*; in the other, she is described as being of the colour of *jaba* (Hibiscus) flower.

Now that there is mass migration of cultured Hindus from East Pakistan, it is high time that a record should be kept of places and families where red and yellow coloured images of Durgah were worshipped, with such other details as the competent questioner may require.

That there are variations in the image and other paraphernalia of the worship of Durgah, goes without saying. In most families in Calcutta, the *chalchitra* or the background of the image is semicircular; but in some old families like the Dattas of Hatkhola, there is no *chalchitra*, but the images are located in their chambers. The lion, or *vahana*, vehicle of Durgah, is usually found with long manes, but in some old families, the lion is maneless, unicorn-like creature. Is it so because in the modern images, the lion is copied from the African lion of the zoo? The Indian lion is said to be comparatively maneless.

The ten hands of the goddess Durgah are usually all equally well displayed, but in the image worshipped by the Mitra zemindars of Chanduli, near Katwa in Burdwan, two hands by means of which the Asura is being attacked are more prominently displayed than the other 8 hands, which are partly covered by the hair.

In some families of Hooghly, the image of Durgah has eight hands instead of ten.

A survey of all these peculiarities "should be made and recorded very soon, for individual worship is fast disappearing on account of its high cost.

(e) Several years ago, we met Yagnapurushananda, a Kashmiri Tantrik scholar of Hardwar, who was often consulted by the late Mr. Justice Woodroffe for elucidation of certain Tantrik texts and processes. He told the writer that there were nine different varieties of the goddess Kali, but altogether he had found 81 varieties in Bengal.

What are they, and where are they to be found?

(f) Some temples are triangular in shape. This may seem strange to many ears, but the fact is so. The temple of Trikoneswar Siva on the Adi-Ganga is a triangular one. It is just near Kalighat bridge opposite the Central Jail in Calcutta. A friend once described eight or nine such temples in Bengal, but the list is lost. Should not a survey of such curious varieties of temples be made?

(g) When a person dies in Bengal, the room where he died is kept lighted by an oil lamp. A brass vessel (*ghati* or *lota*) full of Ganges water (if Ganges water is not available, then water in which a few leaves of the sacred basil plant are immersed), and a piece of iron are kept at the spot where the death took place. We do not keep a mattress either on the spot or in the room in Bengal.

A Tamil Brahmin died at Jubbulpore. His relations kept a folded mattress, a *ghati* of sacred Narmada water at the spot where he had died, and an oil lamp, but no iron, in the room.

On being questioned as to why the mattress had been placed there, the reply was given that if the deceased spirit came back, he would find everything ready for his repose. Here in Bengal, we keep a piece of iron in the belief that it would prevent the spirit from coming. The manner in which Tamil Brahmins kept these things reminded me of a picture of burial furniture as shown in a picture in Stuart Piggot's book on Prehistoric India, published in the Pelican Series.

What are the death customs in different parts of India? Are they not worth investigating?

(h) Horoscopes are of common occurrence. Sometimes they are short, sometimes long. Usually they are 2 to 3 feet in length, but they may also be much longer. The longest of which we have any authentic record was about 350 ft. long. It was that of one of the

Writer's great grand uncle who died in 1864. Horoscopes are usually drawn on paper. We have seen one made on an oblong piece of bamboo about  $2\frac{1}{2}$  in. by  $1\frac{1}{2}$  in. which the position of the planets on a diagram and certain other figures are incised with a sharp etching instrument, and inked in red lac dye. This we have seen at Baganchra, a village near Shantipore in the Nabadwip district in 1918.

Near about that time, the late Shib Chandra Ray Chaudhuri, zamindar of Panihati in the district of 24 Pergannas, showed us a similar horoscope on an oblong piece of ivory with numerous figures inscribed on both sides.

In Bengal our horoscopes begin with a date and the statement that the person whose nativity is being cast is the son or daughter of so and so. In Sambalpore in Orissa, they begin with a date and the further statement that he was born on the...th year of the reign of King ..., the Raja of Puri, and he is the...th son of... This difference is curious.

(i) We are all familiar with the names and images of Dasa Mahavidya or the ten sacred forms assumed by Sati, the consort of Siva. At Baranagore near Calcutta, and at the Chanchra palace near Jessore, Dasa Mahavidya images are daily worshipped.

We met a learned man, named Gautam Rishi, who told us that besides the Dasa Mahavidya, some worship three other Mahavidyas viz. Chandeswari, Laghuchyama and Triputa; others again worship six other Mahavidyas viz., Banadurga, Sulini, Aswarurha, Trailokya, Barahi and Annapurna. He also gave the *dhyanas* of these images, but unfortunately, I could not record them.

Jatindra Mohan Datta

## INDIAN ANTHROPOLOGY IN CURRENT LITERATURE

THE JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND. Vol. LXXIX.,  
Parts I and II, 1949 (published in 1951).

(a) The Early use of Metals in India and Pakistan.

*By Colonel D. H. Gordon.*

This is a very important paper from the pen of an eminent archaeologist whose contributions on Indian archaeology and history are well known. In the present paper the author has shown that the "use of copper was introduced from the West by the peasant communities of the Amri culture type, who came to the Indus valley roughly at about 2800 B. C. ...." The Harappa people with a good knowledge of metallurgy came at about 2600 B. C., who were followed by the Iranians with copper and bronze weapons. Copper tools and weapons have been found all over northern India but not so much in the South. The author thinks that Harappan gold is likely to have come from Arabia. He places the introduction of iron not earlier than the first millennium B. C., and it is likely that it took place between 700 and 600 B. C. Iron was introduced into the South by the Dravidians in the period from 400 to 700 B. C. At about the same period another iron-using people came from Persia to Sind and N. W. F. P. The author however, admits that our knowledge of the Copper and Bronze Age and of the introduction of iron is very meagre. This problem of the Metal Age of India cannot be solved by literary study. The writer most rightly, suggests that digging and digging alone can throw light on this dark period of Indian pre-history. With this end in view he suggests excavations in the upper Jamuna-Ganges Doab and at Bala Hissar, Charsada in N. W. F. P. and also on the line of the old bed of Saraswati where many remains are likely to be discovered about the Vedic Aryans. Results of these excavations alone can reconstruct the story of the pre-historic culture of India. In this connection, it may be noted that recently the Archaeological Survey of India (Exploration Branch) discovered a large number of Harappan sites on the old bed of the Saraswati. The paper is accompanied by two tables and four maps. The tables show the correlation of burial pottery and iron tool types. Two

plates illustrating copper and iron implements have enriched the paper. Besides, there are 4 important maps showing the distribution of copper mines and implements, copper sites linked with ancient regions and sites, South Indian Iron Age sites, and Indo-Aryan borderlands with copper working, copper finds, Iron Age cairn burial sites and other ancient sites. It is a very important paper for students of Indian pre-historic archaeology.

## 2. ACTS ORIENTALIA, Vol. XXI. Para. 3

### (a) Some Kati Myths and Hymns

*By George Morgan Stierme*

In this paper the author has given a critical analysis of myths and hymns with translations and interpretations. These have been collected mainly from Brumotul (Chitral Valley). The paper throws light on the folk culture of the people on the borders of India.

## 3. THE JOURNAL OF THE ANTHROPOLOGICAL SOCIETY OF BOMBAY.

### New Series, Vol. III. No. I.

#### (a) Cultural Contact Between India and the other World.

*By Dr. V. M. Kaikini*

In this paper the author has referred to the contributions of India particularly in the field of science.

#### (b) World Creation Myth and Bilateral Organisation among Kadar of Coohin

*By U. R. Ehrenfels*

In this paper the writer refers to the ethnological significance of the tribe, nature and organisation of Kadar religion, the world creation myth, the divine couple and the bilateral organisation. He also refers to the aboriginal "inherent esteem for female sex and its religio-political expression in myth of creator couple. According to him this conception leads to a deeper and human interpretation of Siva-Sakti, Vishnu-Lakshmi, conception". The paper is of much ethnological interest but the conclusions are not convincing.

#### (c) The Problems of Aborigines

*By Dr. B. H. Mehta*

This paper deals with the problems of aborigines, particularly with reference to their physical environment, religion, language, social life, arts and crafts, daily recreation, education, economic life and isolation. The author then proceeds to the different methods of approach to

these problems. He pointedly refers to a very cautious approach and the need for a public welfare department, reconstruction centres, handling of social problems, etc. Finally he recommends the Gandhian approach, which he considers to be the best way of dealing with the aborigines.

**(d) Significance of Personal Names for the Student of Folk Culture**  
*By Sir Rustam Masani*

This is a very interesting paper relating to the concepts and customs that the personal names indicate. Here the writer confines himself particularly to the field of Islamic beliefs, customs and traditions. He has also discussed some very interesting points such as the time for naming the children, the choice of names, name changing, name transference, name avoidance and concealment. He has also drawn attention to several other points proving that here is a vast field for further investigation.

**(e) The Progress of Education in the Konkan Adiwasis and its Effects on them**

*By D. N. Wandrekar*

The author has referred to the tribes inhabiting this region and has given figures of students of different stages studying in educational institutions. He has drawn pointed attention to the deplorable condition of education in that area and the workings of the various social welfare societies. He hopes that the condition would improve very soon. The treatment is very general.

**4. ANNALS OF THE BHANDARKAR ORIENTAL RESEARCH INSTITUTE**

Vol. XXXI, 1950.

**(a) Primitive Society and Yajna**

*By D. K. Bedekar*

In this paper the writer deals with the origin of sacrifice, particularly human sacrifice which, according to him, is a creation rite. He has also referred to the discovery and diffusion of human sacrifice in primitive society. Tribal gathering is the first institution, and the rite emerged from the social reality of assembly which gradually led to a creation rite. He also thinks that human concepts and institutions grew round this nucleus—rise of cosmic deities, evolution of deities, growth of black-magic, growth of the concepts like Brahma, evolution of ceremonials, growth of marriage taboos, rise of untouchability and certain festivals.

## (b) Studies in the History of Tambula

By P. K. Gode

Literary references as to the different qualities of *tambula* or areca nut and betel have been referred to and explained.

## (c) Some Aspects of Civilisation of the Copper and Bronze age in India

By S. K. Dikshit

This is a very long paper of wide archaeological interest. At the very outset the author has referred to the inappropriateness of the term Chalcolithic for the Indus Valley civilisation—it should rather be called Copper and Bronze Age civilisation. He refers to the Copper Age settlements in Northern India. After Copper we have the Bronze Age civilisation. According to him the Indus civilisation or the Harappa culture is a stereotyped Indian culture—it was a part and parcel of a wider civilisation, the extent of which has not yet been determined. He also refers to the study of pottery of the different known Indus sites which suggests that the Aryans were the authors of the Jhangar ware. Then he refers to the copper and bronze hordes of Gungeria and its affinity with the Harappa celts. He points out the extent of the Copper and the Bronze Age culture from the Indus to the Gangetic valley. But the Gangetic culture is later than the Indus culture, the former represents a late phase of the Copper and the Bronze Age civilisation in India.

The author then refers to certain special features for the Indus valley civilisation—the supremacy of the middle class, oligarchy, etc. Even he traces the origin of caste system in the Indus valley—the Vedic priesthood is to be traced in the priesthood of the Indus civilisation. The nature of the political organisation—city-states, buildings of different areas occupied by the people belonging to different classes, etc. have been also discussed. Regarding Indus scripts and seals the author has drawn attention to the basic affinity with the Brahmi script, and he thinks that the seals were used for commercial purposes. Further reference has been made to the similarities in arts and crafts in Sumer and Indus valley. Finally he refers to the methods of the disposal of the dead, the conception of soul after death, the theory of *punarjanma* (rebirth) and other related subjects. The author has discussed many controversial points about the Indus Valley civilisation but his conclusions are far from being satisfactory in the absence of new conclusive evidence.

5. JOURNAL OF THE ANDHRA HISTORICAL RESEARCH SOCIETY

Vol. XVIII (Parts 1, 2, 3 & 4), 1948

(a) The Andhras

*By S. B. Chaudhari*

Here the author discusses all the references relating to the Andhra people and the varied boundaries of their country.

(b) A Study of the Telugu Place-names

*By A. S. Thyagaraju*

In this paper the writer presents to us a very interesting study of the philological, historical and ethnological significance of Telugu place-names.

(c) Vina

*By C. Narayana Rao*

The author makes a very important study of *Vina* (the famous musical instrument of India) as played upon in Southern India. He has given different names of *Vina* and their significance. Here is a good field for further investigation.

6. THE INDIAN HISTORICAL QUARTERLY

Vol. XXVII. No. 3, September, 1951

(a) *Sakta Festivals of Bengal and their Antiquity*

*By Chintaharn Chakravarty*

The paper deals with the Sakta festivals of Bengal—festivals relating to the different forms of *Sakti*, the mother goddess, the consort of *Siva*. In this connection he refers to the *Kali-puja*, *Durga-puja*, *Jagaddhatri-puja*, *Annapurna-puja*, *Amburachi*, *Mangal-chandi*, etc. He has also referred to a number of other popular rites which have no sastric sanction. This paper is very important for students of folk-religion.

7. THE QUARTERLY JOURNAL OF THE MYTHIC SOCIETY

New Series, Vol. XXXIX. No. 2

(a) The Deeper Meaning of *Yajna* in Indian Religious thought

*By M. Yamunacharya*

(b) The Interpretation of the Aryan and Aboriginal Cultures in India with Special Reference to the *Soras* (*Savaras*)

*By Dr. G. V. Sitapati*

In this paper the author refers to the medicine, magic and prayer, astrology and music as known to the Savaras and also finds their traces in the early Sanskrit literature. He concludes that in all cultural aspects the Savaras and the other primitive people of India developed along with the Aryans till the latter drove them to the isolated forests which arrested their further progress.

(c) **Turtle Lore**

*By Dr. S. T. Moses*

The author discusses in this paper all the current lore about the turtle-egg-laying of turtle, biomimetic significance of turtle, tortoise and cosmogony of the Hindus, tortoise as described in the early Sanskrit literature such as the Satapatha Brahmana, Taittiriya-Aranyaka, Puranas etc., the esoteric and evolutionary interpretation of the Avatars; Gond belief about genesis, Cheros idea of creation, American Indian beliefs about the tortoise. The huge size and longevity of these creatures are apparently the causes of these beliefs, liberation of the turtles caught, ease in capturing Hawksbill turtles when feeding on physalia, turtle catching on land by turning it over, turtle deities at Srikrishna, Tellicherry and Narenika, offerings of tortoise images, rituals where tortoise live, tortoise feeding at Sidhanath, Agra, Puri, etc.; mud-turtles and public health, turtle eating, (turtles' eggs, a delicacy), turtle oil and beliefs about its uses, beliefs about tortoise and housebuilding, tortoise and totems, tortoise stories about perseverance, friendship, evils, etc.; finally tortoise in proverbs and riddles. This paper is of great interest to the students of ethnology and folk culture.

8. **POONA ORIENTALIST** Vol. XV. Nos. 1 to 4, 1950

(a) **Mother-Goddess Durga**

*By Narendra Nath Chaudhuri*

Here the author refers to the literary references relating to the character, qualities and message of the goddess Durga to the world.

9. **THE INDIAN JOURNAL OF SOCIAL WORK**

Vol. XII. No. 3. 1951

(a) **Rural Social Rehabilitation**

*By A. M. Lorenzo*

In this paper the author makes an ecological analysis of the formation, disintegration and rehabilitation of village communities in India. Some valuable suggestions have been made for the rehabilitation of the rural areas.

## (b) Family Welfare Agency in the Community

*By Miss. G. R. Banerjee*

In this paper the writer advocates the introduction of family welfare agency for solving the day-to-day diverse family problems. According to the authoress an individual or a family can handle the family problems adequately. But in most cases external assistance is necessary. The family welfare agency can provide such help to the individuals and the community.

## (c) A New Deal for Hyderabad Aboriginals

*By Syed Khaja Mahboob Husain*

The author refers to various measures which the State Government have undertaken to ameliorate the condition of the aborigines. The writer concludes that as a result of these measures the condition of the State aborigines has improved to a great extent.

## (d) Socio-Economic Condition of the Middle Class Employees

*By Sugata Dasgupta*

The author personally studied the working and the living condition of middle class employees of the Corporation of Bombay. The middle class forms the backbone of society and this study shows their deplorable condition. If this state of affairs is allowed to continue, the whole social structure will break down. Therefore she draws the attention of the Government and the leaders of our country to this deplorable condition and suggests that their difficulties require more attention from the State. According to the author the middle class do not favour any violent change—they seem to support all efforts for our social and economic progress by a gradual and evolutionary process.

## (e) Employer-Employee Tension in Industry

*By A. Devasagayam*

The author of this paper has discussed the various causes of tension existing between the employer and employee, most important of which are inadequate pay, bad-housing and working condition.

## BOOK REVIEWS

### SOCIAL EVOLUTION

*By Prof. V. Gordon Childe, D. Litt., D. Sc.; Published by Watts & Co., 5 & 6 Johnson's Court, Fleet Street, London E. C. 4. First published 1951. Price 10sh. 6d. Pp. 184.*

PROFESSOR Gordon Childe delivered a series of lectures at the University of Birmingham on the subject of Social Evolution in 1947-48. This book is a reprint of those lectures delivered under the Josiah Mason Lectureship founded by the Rationalist Press Association.

In former times, the terms Evolution and Progress were considered to be almost synonymous with one another, and it was also held that human societies, in various parts of the world, were led through a similar series of stages on the way to a uniform type of progress. The Historical School led by Boas and others in the U. S. seriously undermined faith in that theory; but after the political successes of Marxism in the modern world, there has been a revival of interest in the theory of unilineal evolution, with a renewed interest in the theories of Morgan, as made sacred through the writings of Marx and Engels. Under these circumstances, it is right and proper that an archaeologist of Prof. Childe's standing should come forward in order to examine how far this view can be held valid, and if archaeological evidence gives us grounds for arriving at the view in an inductive manner.

One of the most striking features of Prof. Childe's discussion is the way in which he has succeeded in translating archaeological evidence into their social or ideational counterpart. He has presented us with a series of stages through which one human group after another has passed in course of time, and under different geographical conditions. By comparison of the evidence available from prehistoric Europe and Western Asia, with the neighbouring parts of Africa, he has been able to show that the various societies placed under examination did not pass through a uniform series of stages. There were similarities, but also divergences and dissimilarities; but there is no evidence to prove that the societies passed through fixed stages through some inner drive, without mutual influence operating to bring about observed similarities. This is however not to be taken as a denial of the fact 'that cultural

change is an orderly and rational process that can be understood by the human intellect without invoking any necessarily incalculable factors and miracles. On the contrary, it can be described in general intelligible formulae' (p. 175). This is a conclusion of major significance. While thus affirming the value of 'material' factors in shaping the course of human evolution, Prof. Gordon Childe, at the same time, succeeds in denying the inevitability of a uniform succession of stages which mark the road of that evolution.

Prof. Childe then proceeds to compare social evolution with the evolution of biological organisms. He holds the view rightly that culture is, after all, the result of a process of adaptation of man to nature. His comparison of the two processes is detailed and he succeeds in showing how, among animals, survival is dependent upon selection and the propagation of favourable characters *through inheritance*, while, in the case of man, survival takes place through the transmission of behaviour patterns and of associated equipments in the shape of material objects, ideas or organizational forms, without the intermediation of heredity. Culture is diffused from one generation to another, and from one region to another on the face of the earth, and helps human communities to profit by other people's experience and survive. These distinctions are vital to an understanding of culture as well as its trend in course of time.

Although Prof. Childe has failed to obtain from archaeology evidence for the establishment by means of inductive reasoning, of a uniform series of stages marking the course of cultural evolution, he has been able to do so while maintaining a completely objective attitude of mind ; he has not been actuated by propaganda motivation one way or the other.

We hope our readers will share with us our deep appreciation of this stimulating study of one of the major problems of cultural anthropology.

N. K. Bose

### CULTURE WORLDS

*by R. J. Runel and F. B. Kniffen, Professors of Geography, Lusitania State University, .Published by Macmillan Company, New York, pp 591 Price 6.*

"Of various approaches of presenting a regional geography of the world", the authors state in their forward, "that of culture world appears most logical and interesting to students, and most likely provide

a sound background for studies in the social sciences". The authors have divided the culture worlds in seven major culture groups—European, Oriental, Dry, African, Polar and the Pacific worlds. The oriental world is described in detail in chapters 40-47. The authors have not noticed, however, an important culture trait of the ancient Indian—their liberal behaviour towards slaves. From the Arthashastra we learn that if a pregnant female slave is sold or pledged without any provision for confinement, her master shall be fined as well as the abettor. A reference to Dr. Law's thesis on this subject (*Indological Studies. Part II*) may be made in this connection. The authors sum up the effects of British rule in India thus, "Though the impact of the contact with the British and other European peoples has changed India a great deal in such directions as creating trade, development of natural resources, it has not gone very far in changing the medieval outlook of the great number of the Indian people. The span of life has not been lengthened, nor his chances to become literate improved to any appreciable degree". The remarks are unpleasant but true. L. K. R.

### THE COORG TRIBES AND CASTES

(with 27 Illustrations) By L. B. Krishna Iyer, M. A., Head of Department of Anthropology, University of Madras : Formerly Officer-in-charge of Ethnological Survey of Travancore : Corresponding Member of Societa Italiana D' Antropologia Etnologica E. Psicologia Comparata. pp. 74, Price Rs. 7-8.

Though the tribes and castes of Coorg, a secluded area in the Western Ghats, are little known, they afford valuable data for a cultural study of the original inhabitants of India.

The author has presented in this little book a survey of their origin, social division, daily life, ceremonies at birth, marriage and death. These tribes are the Yevavas, Kurubas (Jenu), Kuruba (Betta), Male Kudias, Holeyas, Coorgs, Bants and Gaudas. L. K. R.

### JAHRBUCH DES LINDEN-MUSEUMS 1951

Published by Kurt Vowinkel Verlag, Heidelberg, 1951, pp. 259 with 16 pp. of reproductions.

The Linden-Museum for Ethnology at Stuttgart in Germany has been in existence for 70 years. The volume under review is its first

year book since the Second World War. The first part contains scientific contributions by German and foreign ethnologists on general ethnology as well as on the cultural history of Africa, Asia, Australasia, America and Europe. J. F. Glueck's article on "Die Gelbgusse des Ali Amonikoyi" (The brass castings of Ali Amonikoyi), contains a remarkable study on the problem of trash in the art of primitive races (pp. 27-71). The second part gives us two literary contributions based on travel-experiences in foreign countries: the first by L. Ankenbrand on the celebration of Buddha's birthday in Ceylon; the second by H. Tjadens on the Japanese tea-ceremonial. The third part entitled *Personalia and Musealia* gives a good survey of the German ethnological museums in 1950. The volume has finally a very valuable section with book reviews, which gives a complete survey of the most important ethnological publications.

### THE DEVELOPMENT OF BEHAVIOR

*By Dewy, Richard & Humber, W. J. ; The Macmillan Vo., New York,  
1951 (pp 762+vii).*

To quote the authors' own words, "social behavior is the interaction which takes place between human organism and his environment when his behavior reflects directly or indirectly the behaviour of other human organism". Again, "a special group is any plurality of persons whose social relationships, social attitudes and behaviour traits are similarly influenced or determined by a given personal characteristic or social situation". But man's behavior is not of universal uniformity; it is subject to the effects of environmental situations and of historical development. Although biological inheritance is taken as the basic factor on which human behaviour becomes moulded, yet there underlie certain scientific concepts which help us to understand the ever-changing and pliable human behavior; and thus it can be taken as a frame of reference only. It is truly said that "Social psychology is not a part of sociology but it is a field of its own". So the social psychologist studies the individual interacting at social level. The need of social psychology is to preconceive the human action for ease of tension, that is, to put to rest or in equilibrium the mental states, which is but natural for all human beings.

The authors are well known teachers in the field of social psychology in the United States of America. In the course of reading the book the fields of social psychology in every aspect has become very

'prominen... have adequately dealt with the question of the development of the determinants of interacts and biological inheritance. But the field of "personality development" has not been fully explored. The question of personality has recently become very prominent in various fields of psychology and it needs a good amount of space to criticise justifiably all its aspects. The place of the central nervous system and the geographical issues are aptly put in the book, but the field of culture is not very thorough. Motivation, interaction process and social psychology of age-groups have introduced a natural aroma in the writings. Some of the view-points as expressed in the chapter regarding learning at infancy and at adult age do not coincide in fact with ideas of some outstanding social psychologists like Kimball Young. Childhood, adolescence and adulthood questions are some of the topics well explained. The old-age problem has recently taken a prominent role in American society. Although the authors have tried their best to clarify the definition of who is normal and who is abnormal, but till recently various controversial points have evolved to put back the whole question for further clarification. Minority riots, panics, etc., are some of the topics touched upon in the writings of the book. The chapter on 'Outside the Law' should not only embrace the question of criminals, endocrinology and so forth, but it should also encroach properly in the fields of hermits, saints, etc. There remains ample scope for expansion in the chapter on "religion and human nature". The authors very wisely but scantily put forth some of the industrial problems, such as job and economic system, Ethics, Attitude, Interview, etc., ending with an attempt to clarify the view—points of an ideal good society. But explanation is not fully met in the conception of vector, balance, field and ground, etc., perhaps for shortage of space.

The book will catre to the inquisitive minds of researchers in the field of social psychology as a typical book of reference which the authors themselves have hinted at the beginning. It does not extend any new theory or formula, neither any new explanation; but it contains a handy reference of almost all the authoritative view—points of various famous authors in the field.

S. Sinha

### MANIPURI DANCES

By Leela Row Dayal, Published by Oxford University Press, pages 54, price Rs. 7/-.

This is a very fine book on Manipuri dancing which is noted for

its rhythm and melody. The authoress, who is a ~~wall~~ ~~and~~ tennis player, has analysed the different postures and rhythm with the skill and technique of an expert coach. The book is full of fine drawings, illustrating the different poses with exhaustive notes explaining their rhythmic meaning. Without being an expert in dancing, one can say that the book will prove an invaluable *vade mecum* for those learning to dance. The price is modest considering its get-up, and it is hoped that book will find a place in every cultured home where music and dancing are cultivated.

P. K. Mehra.

## CORRECTIONS

WE regret to announce that Mr. W. H. Newell's article on 'Gaddi Kinship and Affinal Terms' in the last number of the *Man in India* was printed with a number of serious printing mistakes due to manuscript illegibility. The reader will please make the following corrections in his copy of the journal. Some of the minor mistakes, which do not seriously affect the meaning, have been left out.

- p. 83 line 11 Full stop after '2 als'.  
line 17 'Risne' should be 'rishi'.  
p. 86 line 5 'Sipis' should be 'riaras'.  
line 16 'Sipi' should be 'riara'.  
p. 87 line 8 'midst' should be 'mists'.  
line 14 Fullstop after Tregan.  
line 15 Fullstop after 'Suketia'. Capital S.  
line 16 Fullstop after 'Pukeru'. Capital L.  
line 17 Fullstop after 'Hershan'.  
line 18 Fullstop after 'Purshan' Capital A.  
line 19 Fullstop after 'Cheretu' Capital S.  
line 20 Fullstop after 'Aurial'.  
p. 88 line 3 'of the' should be 'or the'.  
p. 90 line 23 For 'father's brother's daughter' read 'father's sister's daughter'.  
line 27 For 'buter' read 'puter'.  
line 29 For 'bhataja' read 'bhateja'.  
line 31 For 'sister's gon' read 'sister's son'.  
p. 91 line 17 For 'ohachuo' read 'chahuo'.  
line 29 For 'bought' read 'brought'.  
p. 92 line 3 For 'bhanerja' read 'bhatija'.  
line 24 For 'sudenej' read 'sudenoj'.  
p. 93 line 20 Read 'sipis as a third and riaras as a fourth'.  
p. 94 line 10 For 'jheputra' read 'jhetutra'.  
line 32 For 'the father's brother' read 'the father's father's brother'.  
p. 95 line 20 For 'sale' read 'sala'.

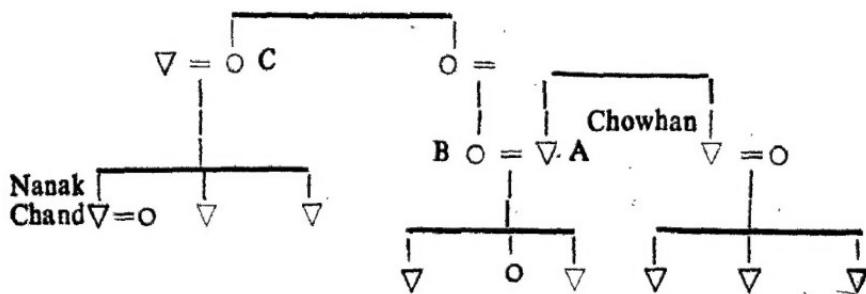
p. 98 line 7 For 'Raj' read 'Baj'. Same for ~~it~~.

p. 101 line 22 After 'Bhatija' write 'give one's bhatija/a gift, it would bc'.

P. 102 line 35 For 'gurding' read 'guiding'.

The following diagram should be replaced for the table appearing on page 90 with the accompanying text.

Nanak Chand is *sala* to Chowhan because Nanak Chand's mother's sister was mother to Chowhan's elder brother's wife. In turn Chowhan is *banwa* to Nanak Chand.



As Chowhan's eldest brother A is dead, he takes his place and would formerly have married B. Accordingly C is his wife's mother's sister. But as B and Nanak Chand are the same generation she would formerly have called Nanak Chand *bhai*. Since *sala* is wife's brother, Chowhan is *sala* to Nanak Chand and Nanak Chand reciprocally is *banwa* to Chowhan. Because of this former matriage tie they regarded themselves as relatives and were continually helping each other from mutual liking. But if they did not like each other this relationship would not be kept up. If Nanak Chand marries again and has a child, the child may not keep up the relationship especially as it will be transformed into a *manman-bhanerja* relationship three families apart.

We are also sorry that of the plates referred to in the article entitled 'A New Stone Implement from Orissa' by Mr. M. D. Sharma in Vol. 32, No. 1 of the Journal some were not printed although reference to them was made in the text.

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